THE

CRITICAL REVIEW,

For the Month of July, 1758.

ARTICLE I.

The natural History of Cornwall. The air, climate, waters, rivers, lakes, sea and tides; of the stones, semimetals, metals, tin, and the manner of mining; the constitution of the stannaries; iron, copper, silver, lead, and gold, sound in Cornwall. Vegetables, rare birds, sishes, shells, reptiles, and quadrupeds: of the inhabitants, their manners, eustoms, plays or interludes, exercises, and sestivals; the Cornish language, trade, tenures, and arts. Illustrated with a new sheet Map, and twenty-eight selio Copper-plates from original drawings taken on the spot. By William Borlase, A. M. F. R. S. Rector of Ludgvan, and Author of the Antiquities of Cornwall. Folio. Pr. 11. 11 s. 6 d. Sandby.

ed, obliged the world with an account of the antiquities of Cornwall, which met with a favourable reception from the public. We could wish, however, that performance had been reserved for this occasion, that the antiquities might have been blended with the natural history, so as to render it more universal and entertaining. As it stands, we find it dry and uninteresting; though, with respect to the subjects of which he treats, the author is abundantly circumstantial and accurate. What renders it the less curious is, that almost all the birds, sishes, reptiles, trees, plants, and minerals, found in Cornwall, are to be met with in every maritime county of England. Here, indeed, we must except the tin, the peculiar production of that Vol. July 1758.

province, by which it was diffinguished above two thousand years ago, from all the other districts of the island. Mr. Borlase has been very full upon the antient and modern methods assed in digging, purifying, dividing, and smelting that metal; and this we take to be the most valuable part of the work. The book is handsomely printed in folio, by subscription, adorned with a new map of Cornwall, and prints representing the feats belonging to the principal gentlemen of that county. After a geographical and topographical description of the land, he proceeds to confider the air and weather, which are moist and flormy; though the feafons are generally fo mild that myrtles will stand the winter without the shelter of green-houses. Here the author takes occasion to erect a fine theory of the cause of winds, as depending upon meteors, vapours, and air intermixed in separate portions, and acting with reciprocal, but, generally very different, powers. A man of a fertile imagination, tinctured with natural knowledge, may build fuch gay caftles in the air, from June to January, without intermission; but, in a moment,

> And, like the baseless fabrick of a vision, Leave not a wreck behind

In the article of vapours and lightening, he describes very remarkable ravages done by lightening in the parish of Maddern, on the 20th day of December 1752. 'Though it might be sufficient here (says he) to relate the matters of fact in the order of time, place, and degree, as they happened, yet one cannot help admiring the different currents, motions, shapes, and desolations of this lightening. The clouds over Moelfra-Hill and the village of Tythrâl, a space of about a mile and half, were so much more charged with instammable vapours than the other clouds, that here they broke both the first and second time, with superior violence; and the thunder-claps were within a few minutes of one another, as being produced but by two portions of one and the same congeries of fire.

'The general tendency of this lightening was the direction of the wind at that time; that is, from the north-west eastward-

the wind at that time; that is, from the north-west eastwardy; but where the principal explosions were (as at the hill and
the house) many branches spread themselves off in all directions.

Nor were the shapes, in which it operated, less various than its motions; sometimes, as from its effects appeared, it was pointed as a dart, in some places edged as a scythe; now but one thin sheet or stream, then two or three, and afterwards one again; now it fell as several separate balls of fire;

· but

but upon the house, where the principal explosion was, as a

' large gush or torrent.

' It was all fire, yet of different powers, according to the * impregnation of its feveral portions: fubtil and penetrating as the electrical fire, it shocked and permeated the human frame; fome parts of it only scorched wood, never melted ' iron, which is the more common effect of the two; fome tore the leather and cloaths, some cut and wounded, and some ' killed, without visible cut or puncture; other parts of this ' lightening again, upon stone, wood, leather, cloaths, and flesh, only discoloured, rushed, and forced, with the power of infected air put into a violent fermentation.

' All this happened in this place, and all in an instant; ' and, although the cloaths were somewhat singed as well as '-torn, and the young man's skin round his waist was also ' scorched, yet, from the general effects of this lightening at the hill and village, I conclude, that it was rather swift and ' irrefiftibly piercing, than dissolvent and inflammatory.' This is followed with an account of a fire-ball that killed one Mr. Pethen in a boat, and struck him overboard into a river, on

the 2d day of August 1757.

In his account of waters, he describes the manner in which vapours rife; takes notice of mineral damps, for which he proposes different remedies; and enters into a discussion of the various hypotheses which have been formed, touching the generation of fprings. Having refuted thefe, he favours us with his own theory in these words: 'That perennial springs do owe their rife to rains and dews is disputed, and thought unlikely, because they do not seem to be at all affected by the excess or deficiency of either; let us confider therefore the nature of fluids and the texture of the earth together, and see whether • perennial fprings may not principally be owing to the waters of the atmosphere, although neither increased by heavy rains,

' nor fenfibly diminished by great droughts.

' The earth must not be looked upon as an absolute dry mass exhibiting here and there its wonders in pouring forth a fpring or fountain, where there was no water before; the earth is oporous in all its parts, full of chinks and ducts in most places, and opens into wide fubterraneous caverns in others: water ' is perpetually falling and infinuating itself by its own gravi-' tation and fluidity into the hollows it meets with, or raifed from lower into higher positions attracted by salts or sands, or transpired in vapour; so that fink as deep as we will, we find water either at rest in natural cavities, or circulating from · higher into lower chanels, fometimes in large currents, oftener in small threads and rills; but in some shape or other every

The next chapter treats of the rivers and navigable creeks in Cornwall, comprehending lakes, pools, and even the sea, and the phanomena discovered therein at the time of divers earth-quakes.

quakes. What naturally follows, is a detail of the foils, cl ys, and steatites. Great part of the Cornish soil is of a shelfy, flatty earth, which bears good corn, and a strong spine of grass. Upon the different kinds of clay or steatites he is very circumstantial; but nothing very exalted can be expected from a subject that thus grovels in the mud: we shall therefore wash our hands of this dirt, and tread as lightly as possible over the fands which he next spreads before us, because some of them are occasionally quick, and others always sinking and unsafe. It may not be amis, however, to observe, en passant, that he gives several inftances in which the fea-fand is lodged far above the present level of the sea. In Por'nanvon-Cliff it is found fifteen feet higher than the full sea-mark: on the grounds of St. Agnes, near the beacon, it is near 500 feet above the fea. These phænomena he imputes to the univerfal deluge which he conjectures to have been effected in the following manner: 'I advance it only as a conjecture at prefent, that it being deter-' mined to extirpate the human race, except one family, by overflowing the earth with water, the fea was the appointed ' instrument of destruction; that, in order to raise the sea to a fufficient height, the bottom, the bed, the chanels of the fea, were to be lifted up, and the wrinkles of the earth smoothed; that when the divine decree was accomplished, the same, first, almighty cause, which conducted the waters to their necessary height, withdrew that power which occasioned the elevation, and the chanels of the fea retreated again to their wonted · level:-But this return was not uniform, exact, and univerfal in all parts of the world, but general, and fufficient to all the purposes of animal and vegetable life; consequently, far the greatest part of the up-lifted bottom returned to the place from whence it came; part rested in its most elevated station, hence the fands, pebbles, and shells, on the highest hills; part ' funk fomewhat, though fome hundred yards fhort of its former depression, as was the case at St. Agnes-Hill, and part funk till it came within a few feet of the common level of the ' fea, whence the pebbles, fands, and fhingle of Por'nanvon- Cliffs, and places which exhibit the like remarkable phæno-• mena, are found so near full-sea mark.

'This method of raising the sea-waters, so as to deluge the earth, will appear at first fight, I imagine, too operase and unnatural to be chosen by an all-wise agent; it may be so; but let us enlarge our conceptions, let it be considered, that the highest mountains are no greater prominencies from the surface of our globe, than the dust upon a globe of one foot diameter; that the sea is no deeper than the surrows, nor the mountains higher above the earth, than the ridges in a sheat

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of paper. Supposing then these furrows to contain a suffi-

ciency of water, and a determined resolution to make that water overwhelm the ridges of this paper for a while; would

it not presently occur, and seem the easiest and most eligible

· method to raise these furrows so as that the moisture con-

tained might overflow fuch ridges; and afterwards, by letting

them drop again, to restore both the ridges and surrows to their first intended situation? The diligent enquirer (besides

their first intended situation? The diligent enquirer (besides the feasibility of this method, and the egregious absurdities of

an abys, apertures, disruptions of the shell, and the like, which

are the insuperable difficulties of all other schemes for supply-

ing water fufficient to deluge the whole earth) will recollect a

great variety of phænomena in the present structure of the

earth, which will ferve to elucidate and establish this hypo-

thesis. - So far for accounting for the different levels in which

we find sea-sand.' He then produces a theory of mountains and hills, which he thinks are the necessary result of more solids in one part than in another, at the time of the first general in-

duration, as the waters fubfided.

The feventh chapter turns upon the antient and present state of husbandry in Cornwall, in which we find nothing remarkable but their manures, which are generally productions of the sea, such as sea-sand, alga marina, sucus, conserva or ore-weed, and decayed pilchards. Their crops of corn are very plentiful; formerly they exported great quantities to Spain. The turnip husbandry has been lately introduced with success. Potatoes thrive well in shallow, poor lands: the author had one which weighed two and thirty ounces.

In the ninth chapter, we have a description of the stones in Cornwall, among which we find quartz, commonly called white spar, cockle, elvan, killas, slat, freestone, moorstone, or granite of different kinds, and marble. The next chapter describes those of ornament and curiosity, such as pebbles, slints, porphyry, talc, stalactites, asbestos, and small gems, namely topazes, rubies, amethysts, and tinged chrystals; but all these

are too fmall to be of any value.

He proceeds to enquire into the general basis of stone, a lapidistic matter which pervades and mixes more or less with the substance of all stones, and may be justly esteemed the universal cement, by which earth and minerals are combined into all the several orders and species of stones: for when this cement is dissipated by fire, or dissolved by a menstruum, the stone becomes earth or metal. This cement is either spar, crystal, or diamond. These he treats of, not only as distinct stones in segure, nature, and effect, but as one universal cement pervading and connecting all other stones in three degrees of purity and

perfection. The chrystals he not only represents in their different figures in a plate, but ascertains their size, transparency, colour, weight, hardness and texture. Among the semi-metals of Cornwall, he enumerates bifmuth or tin-glass, speltre-ore, naptha, antimony, molybdæna or pencil-lead, cobalt, and mundic. This last is a pyrites, known among the naturalists by the name of marcafite: it is found in digging for copper; but unites closely with tin-ore; and is composed of arsenic, sulphur, vitriol and mercury. Mr. Borlase is very full on this mineral, and presents us with two copper-plates, exhibiting a great variety of shapes in which it appears. He imagines that the fiffures in which metals are found, were no other than cracks in the earth as it hardened after the general deluge: yet these very fiffures are as necessary and useful as the strata through which they pass: they are drains for the redundant moisture of the earth; through them the rain that finks beneath the channels of the rivers, fo as not to be conveyable above ground, returns into the fea, bringing the falt and mineral juices of the earth into the ocean, enabling it thereby to supply the firmament with proper and fufficient moisture, and preserving that vast body of water, the sea, wholesome, fit for fish to live in, and failors to navigate. In these fissures, the ingredients that form the richest lodes, by the continual passing of waters, and the menstrua of metals, are educed from the adjacent strata, collected and conveniently lodged in a narrow channel, much to the advantage of those who search for them. Lastly, without those fiffures we could not make drains to our mines and quar-Whatever fills these fissures, whether clay, stone, mineral or metal, is in Cornwall called a lode; and the properties, parts and inclinations of these lodes, make the subject of the fourteenth chapter, which is also illustrated by a copper-plate. This disquisition is very curious, and may be useful to those who in their studies penetrate below the surface of the earth. In describing the metals found in Cornwall, he begins with tin, of which he favours us with the whole process, including an account of the places where found, the feveral states in which it is found, as in the floor, in spots, in shode and stream, in fand and slime, the feveral ways of fearthing for and discovering tin, the bounds and the right for fearching, the manner of mining now practised in Cornwall, and the progress of the works. Then he describes the hydraulic engines used in that county, the rag and chain, the water-wheel and bobs, and laftly, the fire-engine: all these are accurately explained and delineated on plates. He afterwards makes us acquainted with the method of dividing tin-ore, of stamping and dressing, of preparing it for the furpace, of buddling, trunking the flimes, framing, melting and B 4 coining coining tin. He calculates the annual profit accruing from this metal: he points out its uses, its origin, connexions, shape and richness: he entertains us with a plate, exhibiting the figures of a variety of tin-chrystals; and finally, he gives a fummary of the antient and present constitution of the stannaries. This chapter would, of itself, form a very valuable pamphlet.

He tells us, that there are many iron-lodes in Cornwall, but none worked to good effect, although in some of them the ore is very rich and near the furface. Within these fixty years the copper of Cornwall has been turned to good account. 'Copper

- · is found fometimes deposited on the sides of fissures in thin
- films, which are no more than the fediment of waters issuing from fome copper lode; fometimes in fpots and bunches irre-
- gularly dispersed, but mostly in fissures, in like manner as

• the tin-lodes.

- * Copper-lodes throw from them few shodes, so that they are not often accessary to their own discovery; the reason of
- which is, that there is feldom any copper on the back of the
- · lode, so as to constitute a broil; but when there is, and that
- copper is heavy, and promotes its own removal downwards by
- its gravity, copper-lodes throw shodes as well as those of tin,

of which feveral inflances might be produced.

· Veins of copper are oftentimes by the fedulous discovered in cliffs, where they are laid bare by the fea, copper being

· much easier discerned than tin. The most encouraging leader

to copper is what the Cornish call Gossan, which is an earthy,

sochrous stone, ruddy and crumbling, like the rust of iron.

Where the ground is inclinable to an easy, free, blue killas,

intermixed with white clay, the miners think it a promifing

· fymptom. A white crystalline stone is also reckoned very re-

tentive of yellow copper. The ore does not lie at any one · certain depth; but it is a general rule, that when copper is

· found in any lode, that lode should be funk upon, it ge-

e nerally proving better at some depth, than when it is first touched.' Then he forts the ores by the colour and texture, into green, blue, grey, black, red, malleable, and illustrates their figures in a copper-plate. He concludes this subject with matters worthy of further confideration, relating to the copper-business in Cornwall, suggested to the lords and miners. Silver and lead are likewise found in Cornwall, the first in very fmall quantity, the last very little wrought in this county. Nor is this part of England destitute of gold-mines, could they be properly afcertained. 'In 1753 some persons, of the parish of 6 St. Stephen's Branel, streaming for tin in the parish of Creed,

near the borough of Granpont; and, perceiving some grains f of a yellow colour, very small, but yet so heavy as to resist

* the water, culled out some of the largest grains, and carried the tin to a melting-house near Truro. The gold was in such plenty in this tin, that the melter, Mr. Walter Rofwarne, taking the gold at first for mundic or copper, blamed them for bringing it for fale without having first burnt it; but, upon affaying the ore, found it to make a very great produce, and exceedingly fine metal: the miners then took out · of their pockets feveral pieces of pure gold, and one from as · large as a walnut, with a pure vein of gold in the middle of * the stone, about the bigness of a goose-quill; the clear bits. of gold, and that in the stone, were then assayed, and produced just an ounce of pure gold. The tinners became afterwards more attentive to what was mixed with their stream. tin; and at feveral times are supposed to have fold somewhat confiderable. This piece of good fortune not remaining any · long time a fecret, the tinners in the adjacent parishes of St. f Stephen's Branel, St. Eue, and St. Meuan, followed their example, and have rather had better fuccefs this way. Luny, in the parish of St. Eue, James Gaved, a streamer there, found native gold immerfed in the body of a blue · fandy flat. He has also feen gold (as he fays) kerned about fpar; that is, fixed and concreted on the quartz; but it is ' very rare to find it thus incorporated. Mr. Roswarne above-· mentioned suspects, as he informs me, that there is gold, " more or lefs, in ail stream-tin in the county, having feen it in ' tin brought from St. Eue, Creed, St. Stephen's, St. Meuan, · Probus, Kenwyn, and many other parishes. He has now by him one piece of pure gold, brought him by the foremenf tioned perfons, which weighs to the value of twenty-feven · shillings, another that weighs in value seventeen shillings. He has feen two or three bits from Probus which weighed about ' fifteen shillings, intermixed with white spar or quartz. I have one which weighs half a guinea; but the largest piece found ' in Cornwall, which has reached my notice, is that in the possession of William Lemon, Esq; of Carclew, which weighs in gold coin three pounds three shillings, or fifteen pennyweights and fixteen grains, brought him in the latter end of September 1756. On each fide it has a light-brown, fatty earth, which is the only impurity it is mixed with. It was found in the parish of Creed, near the borough of Granpont. 'That gold lies fometimes fo intermixed with tin was not

That gold lies sometimes so intermixed with tin was not unknown to the ancients. Pliny (lib. xxxv. ch. 16.) gives us a plain account of these metals being sound together in the same manner as we find them now in Cornwall, the tin in calculi, (that is, smooth, pebbly ore) of the same gravity as the

ore of gold, and separated by searsing. " Separantur canistris,"

' fays he, (not caminis, as in some editions) that is, by baskets

of the same nature and use as our searces. Besides this de-

' tached gold, gold is also immured, if I may say so, in tin;

the tin-crystals have not only flammulæ or sparks, but also freaks of gold; gold has the same appearance sometimes in

foreign parts. At Wunfiedel, in the margraviate of Baireuth

in Germany, tin-grains of various colours, holding particles

(flammulæ) of native gold, are not uncommon. This late discovery of gold in Cornwall is therefore neither without former precedents, nor at present of any great ims portance; it is in its infancy, though known one thousand · feven hundred years fince; and, if purfued, will at least gain ' my countrymen the credit of industry, if it should not produce the profit which industry deserves. Some circumstances in this discovery, however, may well claim our farther attention. First, This gold found in the parishes above-mentioned, is always intermixed with grains of tin-ore, which, by their · roundness and smoothness, shew that they have been washed · down from the neighbouring hills. Is it not likely then that the fame hills contain gold as well as tin, each in their mi-· neral ftate? for native gold fixed in the stone, and veining it, as well as in separate grains, is now found in Cornwall; and native metal is but the accidental defacation of the ore • by fubterraneous menstrua. In America gold is found in veins • as other metals are found here with us, and it is most likely that the gold-dust found in Africa and Asia, in the sands of brooks and rivers, all comes from the veins in the hills adjacent, though not worked by the ignorant Moors and Indians. 4 Should not therefore all uncommon ores near these places be well examined, not only by washing, but by the more cer- tain criterions of quickfilver, fire, and the hydrostatic ba-· lance? Our streamers know indeed native gold, but gold is onot always apparent to the eye; fometimes it is found in brooks, as in Larecaja in American Spain, in colour and · shape like small shot (the ore being smoothed and rounded by * the agitation of water as our tin-grains); of these they melt away their outward coat, and then the granules are of a red · colour: fometimes gold is found in the clefts of rocks, of a · grey colour on the outfide like unto lead: fometimes the ore · of gold well powdered must be tried and collected by quickfilver, or great loss will enfue, and the gold be washed away. Again, gold is often found mixed and incorporated with other metals, with copper often, with filver still oftener, and sometimes inferted in tin crystals, but mostly bedded in diverse forts of stones, and sometimes to the depth of one hundred and fifty fathoms.

'It may be worth while therefore for people to acquaint themselves with these different appearances of this most precious metal; and fince we are convinced by these late discoveries, that we have more gold in Cornwall than was ever · formerly imagined, it may reasonably be suspected, that in our copper and tin, in the state of ore, and for want of a · proper commixture of quickfilver, a great deal more escapes ' us than we collect. Laftly, in working the mines of those hills in St. Stephen's, St. Meuan, and St. Eue, for which f there is such apparent encouragement, careful and intelligent · perfons should be appointed to superintend the bottoms; befides, the brooks and rivers, which run from those hills,

' might probably pay well for fearching.'

In his account of the vegetables of the land and fea, we find nothing remarkable. The same fruit trees, shrubs, plants, roots, flowers, &c. are found in other parts of the kingdom, There is fomething, however, very fingular in the great esteem which the antient Cornish had to the Elder, or Sambucus. . Cornu-british words for it are scau and scauan, and hence we have many villages, and two ancient families denominated. ' It may at first seem to be owing to the general scarcity of trees that even this humble shrub was thought considerable enough to give name to fo many places; but if we confider the great virtue of this plant in all its feveral parts and stages, we shall be convinced that few shrubs deserve a greater regard. It is ' very hardy, enduring all weather, fuiting all foils, eafily propagated by feeds and cuttings: the medicinal use of its feveral parts is extraordinary; its leaves, buds, bloffoms, berries, ' pith, wood, and bark, have more virtues than can possibly have room here without entering into too minute a detail; ' the following are most obvious, and most generally applied to for relief: the buds and leaves, as foon as they appear, are gathered to make baths, fomentations, and cataplasms for wounds, and are a remedy for inflammations, &c. As foon as the flower-buds come on, they ferve to make a pickle of very good flavour; the flowers at their opening, infused, communicate their tafte and fmell to vinegar; infused, and let to stand in best Florence oil, excellent to be laid over bruises and external fwellings, and, taken internally, very healing and cooling : the flowers, in their natual state, are very sudorific, and asfwage pains; distilled with simple water make a sweet, cooling wash for the face in summer, which takes off inflammations of the eyes as a collyrium, is good for the wind in children, and a very innocent vehicle in fevers; distilled on spirits it asswages cholical pains in adult persons; and there is a spirit to be f drawn from the elder, which the late Duke of Somerset (who ' married

' married the heiress of Piercy) took for the gout, as I have

been informed, with fuccess. When the berries are ripe, they

make a very wholesome syrup in colds and fevers; and some
make wines of them, by mixing rhenish or other white wines.

Of the younger sappy branches, the bark pared off close to

the wood makes a falve efficacious beyond most others for

fealds; this inner bark is also very falutary in dropsies, fays Mr. Ray; the wood is close-grained, sweet, and cleanly, and

beyond any other chosen by butchers for skewers, as least af-

feeling their flesh: it is very beautiful also for turner's-ware

and fineering, and, for toys, of as neat a polish as box,

and the very pith of this useful shrub is proper to cool, and

" make uicers and wounds digeft." In this chapter we likewise find a curious theory of coral in general, which we have not room to infert. What we have faid of the vegetables may be applied to the birds, as well as to the land and water infects of Cornwall, some of which are accurately represented in engraved copper-plates. The Cornish fea pours forth a variety of delicacies for the pampered epicure. Here we have the turbot or rbombus, the fole, the conger eel, the fand eel, the rock-cod, the mackrel or scomber, of which the antients made their famous pickle garum, the cucullus or cornuta anglicé gurnard from its grunting like a fow. Notwithstanding this imputation, the merry Comus of Bath prefers its voice, for sweetness, to the pipe of Hermes; thence he denominates it the piper, and declares it a fish of great personal merit, no disparagement to the deauratus or doree, which the same facetious voluptuary has dignified with the christian name John, In these seas likewise the mullet, the whiting, and many other delicate kinds of fish are taken in great quantities: but that which chiefly enriches the county is the fishery of pilchards. This fish comes from the north seas in immense shoals, and in the fummer months, about the middle of July, reaches the * iflands of Scilly, and the Land's End of Cornwall; not driven by fish of the cetaceous kind (as some have thought), but fhifting their fituation as the season prompts, and their food allures them; thus by a tour to the warm foutherly coafts of Britain, they strengthen and prepare themselves and their young ones to return to the great northern deeps, for the * fake of spawning and securing themselves during the stormy

feafon. The pilchard continues off and on in the fouth channel, principally from Fawy harbour westward, and is taken

fometimes in great numbers at Mevagisfy, in in the creeks of

Falmouth and Hêlford harbours, in the creeks of St. Kevran, and in Mount's Bay; some pilchards are also taken in St.

* Ives Bay in the north channel. With the taking this fish by

· feyne-nets and drift-nets, the curing them with falt, preffing them, (fuming them being for many years laid afide) and exporting them to foreign markets, the world is fo well acquainted, that I need only fuggest in a summary manner the advantage which this fish is of to the county of Cornwall: · it employs a great number of men on the sea, training them thereby to naval affairs; employs men, women, and children, at land, in falting, preffing, washing, and cleaning, in · making boats, nets, ropes, casks, and all the trades depending on their conftruction and fale; the poor is fed with the offals of the captures, the land with the refuse of the fish and falt, the merchant finds the gains of commission and hones commerce, the fisherman the gains of the fish. Ships are often freighted hither with falt, and into foreign countries with the fish, carrying off at the same time part of our tine • The usual produce of this beneficial article in money, is as ' follows: by an exact computation of the number of hogsheads exported each year for ten years, from 1747 to 1756 inclu-' five, from the four ports of Fawy, Falmouth, Penzance, and St. Ives, it appears, that Fawy has exported yearly 1732 hogheads, Falmouth 14631 hogheads and two thirds, Pen-* zance and Mount's Bay 12149 hogsheads and one third, St. ' Ives 1282 hosheads; in all amounting to 29795 hogsheads: every hogshead for ten years last past, together with the · bounty allowed for each hogshead exported, and the oil made out of each hogshead, has amounted, one year with another at an average, to the price of one pound thirteen shillings and • three-pence; fo that the cash paid for pilchards exported has, at a medium annually, amounted to the fum of forty-nine • thousand five hundred and thirty-two pounds ten shillings. The coast of Cornwall also abounds with shell-fish, and particularly with oyfters; of which our author relates the follow-

The coast of Cornwall also abounds with shell-sish, and particularly with oysters; of which our author relates the following pleasant incidents. 'This sish has the power of closing the two parts of its shell with prodigious force by means of a strong muscle at the hinge, and Mr. Carew, (p. 31) with his wonted pleasantry, tells us of one whose shell being opened as usual at the time of slood (when these sisteems participate and enjoy the returning tide), three mice eagerly attempted to seize it, and the oyster classing fast its shell killed them all. It not only shuts its two valves with great strength, but keeps them shut with equal force, and (as I have been informed by a clergyman of great veracity, who had the account from a creditable eye-witness to the fact) its enemies have a skill imparted to them to counteract this great force. As he was sishing one day, a sisherman observed a lobster to attempt an oyster several times, but as soon as the lobster approached,

* the oyster shut his shell; at length the lobster, having waited with great attention till the oyster opened again, made a shift

to throw a stone between the gaping shells, sprung upon its

· prey, and devoured it.'

He proceeds to describe a variety of shells and fossils; then treats of the reptiles and quadrupeds, among which we find nothing extraordinary. The twenty-fixth chapter turns upon the inhabitants; their number, usual age, customs, pastimes, festivals, manners, language, tenures, and arts. This county, especially in the maritime parts where the people live chiefly on fish, is extremely populous: the inhabitants are healthy, active, and long-lived. In the year 1676, a woman died in the parish of Gwythien at the age of one hundred and fixty-four, and retained her health and memory to her last illness. In point of disposition, the Cornish men are generally hospitable and goodnatured to strangers, though litigious among themselves. They still retain some antient customs which are not easily accounted for. On the first day of May they deck their doors and porches with green boughs of fycamore and hawthorne, and plant stumps of trees before their houses. On May-Eve they make excursions into the country, where they cut down a tall elm, and bring it into town in triumph. Having fitted a straight taper pole to the end of it, they paint and erect it in the most public place; and, upon holidays and festivals, adorn it with garlands of flowers, enfigns, or streamers. They make bonfires in every village on the eve of St. John Baptist's and St. Peter's day: these are supposed to be the remains of the druid superstition. They used to act plays or interludes in the Cornish tongue on scriptural subjects. There are two MSS of these pieces in the Bodleian library. They are composed in stanzas confifting of eight verses, with alternate rhimes. 'The first ordinale of the creation begins thus (God the Father speak-' ing:)

· Cornish.

· En Tas a Nef ym Gylmyr

· Formyer pub tra a vydh gwrys

· Onan ha tryon yn gwyr

· En Tas, han Mab, han Spyrys.

· Ha hethyn me a thefyr

· Dre ou grath dalleth an bys

'Y lavaraf, nef, ha tyr'
Formyys orthe ou brys.

' Englished.

- ' The Father of heaven I the Maker,
- · Former of every thing that shall be made,

· One, and Three, truly,

- . The Father, the Son, and the Spirit.
- ' Yes-this day it is my will
- · Of my especial favour to begin the world.
- ' I have faid it-Heaven and earth
- Be ye formed by my counfel.
- This metre is not ill chosen or unmusical.
 - The scanning to be performed in the following manner:
 - · En Tas-a Nef-ym Gyl-wyr
 - · Formy-er pub-trā vyth-gwrys, &c.
- ' It is the Trochaic Heptafyllable, otherwise called the Tro-
- chaic Diameter Catalectic. It confifts of three trochees and
- a femiped. Aristophanes was very fond of it at times.
 - In Latin, Horace adopts it,
 - " Non ĕbūr nĕque aūrĕūm."
- 'In English, Shakespeare frequently uses it; and Dryden for his tenderest numbers:
 - " Softly sweet in Lydian measure,
 - " Soon he footh'd his foul to pleasure."
- " The language fuits the metre; as the fubject is fublime,
- the composition is not unsuitable, as may be seen by the
 - above and following stanza:
 - 'Yn peswere gwreys perfyth
 - 'Then bys ol golowys glan,
 - ' Haga hynwyn y a vyth
 ' An Houl, an Lor, h'an Steryan.
 - Me a fet a hugh an gueyth
 - 'Yn creys an ebron avan,
 - ' An Lor yn nos, Houl yn geyth
 - ' May rollons y golow fplan.
 - ' In the fourth [day] I shall make perfect
 - For the world all the resplendent lights,
 - And I will that they be called
 - The Sun, the Moon, and the Stars.
 - · Them will I place on high
 - In the midst of the firmament above,
 - . That the Moon by night, the Sun by day,
 - · May yield their glowing splendor.
- The stanza consists of eight verses with alternate rhymes;
 sometimes this is changed for a stanza of six, of which the first
- and fecond are of one rhyme, the fourth and fifth of another,
- and the third and fixth line of a third rhyme; but the heptafyl-
- · lable metre continues throughout with few deviations in this
- ' piece and all the others.

'The poetry is the least exceptionable part of these inter-· ludes. A person called the Ordinary was the chief manager; every thing was done as he prescribed, and spoken as he ' prompted. The persons of the drama are numerous; in this o no less than fifty-six in number; in the second, fixty-two; in the third, fixty; princes, patriarchs, faints, angels, (good · and bad); and even the persons of the ever blessed Trinity are introduced. Unity of time, action, and place, is not at all ' attended to; this first-mentioned play runs through a space of time from the creation to king Solomon's building the Temple, and incongruofly ordaining a bishop to keep it. It takes in also the fabulous legend of the martyrdom of Max-· imilia, in which part the actors are a Bishop, a Crosser-bearer, a Messenger, four Tormentors, the Martyr, Gebal, and Ama-· lek. The bishop gives to the tormentors for putting the ' martyr to death, Behethlan, Bosaneth, and all Chenary. · King Solomon speaks the epilogue; the audience, with a ' ftrict charge to appear early on the morrow in order to fee the Passion acted, is dismissed in these words:

" Cornish.

· Englished.

- 'Abarth an Tas, 'In the name of the Father,
- Menstroles a' ras Ye Minstrels holy, · Pebourgh whare
- ' Tune your pipes,

" Hag ens pub dre. And let every one go to his home."

The Cornish are famous for wrestling and hurling. They have their wakes, their local customs, and processions; and they diffinguished themselves remarkably by their valour and loyalty in the reign of Charles I. who wrote them a letter of thanks, which is a very honourable testimony of their services and fidelity.

Mr. Borlafe takes occasion to explain the reason why Cornwall fends fuch a number of representatives to parliament. The boroughs of that county being poor, and, in some meafure, dependent on the demesne lands of the crown, were admitted gradually to this privilege, by a fuccession of kings from the time of Edward VI. in order to augment the influence of

the government in the house of commons.

Our author gives us to understand, that the Cornish tongue is a dialect of that language which was formerly common to all Britain, and more antiently to Ireland and Gaul. He fays the radicals of the Welsh, the Cornish, and the Armoric, are the fame; but their grammar has so varied that they cannot converse with each other. The Cornish is the least guttural of the three. It was generally spoken in that county till the reign of Henry VIII. Even so late as the year 1640, the vicar of Pheoke was obliged to administer the sacrament in the Cornish tongue: about fifty years ago, it was spoken in the parishes of St. Paul and St. Just: at present, however, it is altogether laid aside, and almost totally forgotten.

The last chapter contains an account of some inconsiderable antiquities discovered in Cornwall since the year 1753. On the whole, we will recommend the performance as a work of merit, abounding with curious disquisitions of natural knowledge.

ART. II. The Infolvent: or, Filial Piety. A Tragedy. Written by the late Aaron Hill, Esq; author of Merope, partly on a plan of Sir William D'Avenant's and Mr. Massenger's. 8vo. Pr. 1s. 6d. Reeve.

R. Theophilus Cibber, the editor of this piece, gives us to understand in the preface, that it was supposed to have been written by Sir William Davenant, founded on a play of Massenger, intituled, The Fatal Dowry: that the late Mr. Aaron Hill having undertaken to make some alterations in it, which were judged necessary by the players, almost new wrote the whole, especially the last act, which was entirely his own. Indeed the hand of that gentleman is very visible through the whole performance, in which we every where find that affectation, that stiffness, that uncouthness of diction, sentiment, and fituation, which characterise all his dramatic writings. In fome places the language is hardly intelligible; in others, low Yet, notwithstanding all these singularities, and ludicrous. there is fire and nature in this as well as in all his other plays; and, if the Infolvent did not fucreed on the stage, it must have been owing to the rawness of Mr. Cibber's actors, rather than to the demerit of the performance. Nor should we be furprifed at the miscarriage of a company so hastily collected, and so imperfectly disciplined. We think the town ought to have overlooked these defects in favour of a veteran comedian, from whose theatrical talents they have formerly derived so much mirth and entertainment; and encouraged him in the day of diffress, not only in remuneration of his own services, but also in regard to the memory of his father, whose genius as a comic writer is univerfally acknowledged; and whose abilities as an actor were never furpassed.

Though the plot of this play is in some places faulty, and the incident of the surgeon towards the close, casts an air of ridicule upon the catastrophe; yet the incidents in general

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are well contrived, the fituations interesting, and many of the scenes worked up with spirit and even enthusiasm. Chalons, the brave fon of a great general, incurs voluntary imprisonment, in order to procure the release of his father's body, which was detained in custody, unburied, by his rigid creditors. Valdore, a worthy and generous nobleman, struck with this uncommon instance of filial veneration, as well as with the other virtues of the fon, pays the debts of the dead general, and bestows his only daughter Amelia, in marriage, on Chalons. This young lady gives him her hand with reluctance, having before conceived an affection for another young nobleman called Aumele, a gay, infinuating, unprincipled libertine, who had gained over the confidante Florella to his interest. By her means, he is admitted into the garden, where he accosts Amelia, now counters of Chalons; and, in vain, employs all his addrefs in perfuading her to violate her conjugal faith. She rejects his addresses with disdain: nevertheless, encouraged by the solitariness of the place, he seizes her hand, and even ravishes a kifs. In that attitude they are discovered by the count's friend La Foy, a brave blunt foldier, who reveals to his friend what he had feen. Chalons, being impressed with the utmost veneration for the virtue of his wife, receives this information in a transport of rage, taxing La Foy with villainy; and a quarrel enfues between the two friends, who, neverthelefs, are reconciled. Chalons pretends to his wife urgent. business that obliges him to be absent for some days. Florella, the confidante, communicates this circumstance to young Aumele, and introduces him privately to the countefs's bedchamber. Chalons, accompanied by La Foy, returns privately: the former finds Aumele kneeling by his wife's bedfide, gives him a fword, fights, kills him, and locks up the countess in the room with the dead body. Florella, stung with remorfe, confesses her own guilt, and vindicates the honour of her miftress. The father, the husband, and the friend, transported with joy at this discovery, command her to attend her lady, who has by this time, in despair, plunged a sword into her bosom. She appears upon the scene in a dying condition, and confirms the tale of Florella: then she is conveyed to another apartment; and, by the extraordinary skill of a furgeon, her wound is cured. One would imagine the author had the Orphan and the Fair Penitent in his view when he digefted his plan, and delineated his characters, which are ftrongly marked and well fustained. We do not remember to have seen a more spirited scene than the following, between Chalons and the honest La Foy.

· LA For.

- " Curse on my wayward fate that sent me here,
- * To interrupt their loves-It was ill-breeding.
- * Some foft, cool wit, whom love more warm'd than friendship,
- · Had paft it o'er, or forwarded the bufiness;
- So wifely gain'd good-will-and pleas'd 'em all.

· Enter CHALONS.

CHALONS.

- Muttering alone, La Foy? What fretful scheme,
- What melancholy rage of honest heart,
- ' Disturbs thy spleen thus early? Prythee brighten;
- Since fortune smiles at last-for shame, smile with her.
- ' If thou'rt untouch'd within, and know'ft no joys
- Thy own-let mine inspire thy fullen temper.
 - La F. Yes—that's a wife man's plot—Thy joys difturb me.
 - * Cha. Thou art too good for envy! What then moves
- * How can a happiness, like mine, diffress thee?
- Married to beauty-reconcil'd to hope;
- · Splendid in riches—in thy friendship happy;
- And bleft by fame and love-what want I more?
 - La F. One thing I'm fure you want.
 - Cha. What's that ?
 - · La F. Diftrust
- · Of woman's wavering love.
 - · Cha. Nay, now thou'rt cynical:
- Merits my wife no truft?
 - La F. Aye-trust her on.
- * As to myfelf, I feel no pain from woman:
- 'Twas for your fake, I found one not quite angel.
 - · Cha. For my fake !- Be explicit in thy charge,
- * And ease my heart's new anguish.
 - La F. No-rest it here:
- * You are too young a lover-Ill prepar'd
- · For proofs your faith will ftart from; 'twill unman you.
 - · Cha. What can'ft thou mean?
 - La F. Why shou'd I pull down plagues?
- Why should I strike diseases through thy bones,
- Beyond the cure of medicine—Scorch thy blood;
- * Rob thy torn hours of peace-and fend in pain ?
- Better continue blind, than fee but mifery.
 - 'Cha. Thou strik'st a deadly coldness to my heart.
- Point out this foe to life; that, like a man,
- ' I may fubdue, or bear it. Am I not,

If it be fate, I'll meet it-If but a fault

· That cankers on my mind, I'll cut it off,

· Or cure it by my reason. Thus adjur'd,

· If you continue dumb, you doubt my courage.

La F. I've heard that married men find friends in heav'n:

' You should have many there. - Pray their kind guard

To keep your fair wife chaste. [Is going.

' Cha. Stay-what faid'ft thou?

· Take this devouring wolf out of my breaft.

' Stay-or for ever lose me.

La F. Nay-I but go,

' Lest I should lose thee.

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' Cha. Have a care thou dost not;

'Thou hast inflam'd me now-and I will have it.

La F. Nay-be content-thou hast it.

· Cha. Death and hell!

· Haft it-what have I?

La F. Why a fine young wife.

· How can I help it, if she too has claims,

Beyond all rights allow'd her.

· Cha. Rights! claims -- Furies!

Speak plainly, or thou dy'ft.
La F. Why there 'tis, now!

Was it my fault, that I don't like her kiffing

The fon of your wrong'd father's mortal enemy?

' Cha. Nay, then-the world has no fix'd honour in't;

And he, whom most I lov'd, is most a villain.

· La F. Hark-my hot child! villain's a wrong, bad word;

' Use it no more-or, if again thou speak'st,

Think twice, who hears—and let no name denote him.
 Cha. Nature and name thy own—Hear it to heav'n,

' Ye faints, that waite no prayer for falshood damn'd;

" Hear it, ye winds, and blow it through his ear,

"Till his heart shrinks to feel it—that La Foy,

· His friend's belyar, his ftain'd sword's disgracer,

Envies superior blis- and is a villain.

La F. Madman, be dumb for ever. Thou hast shrunk

· Indeed my feeling heart, and pour'd in horror.

' [Drawing.] Look here—behold this fword—bright as the

"Tis drawn for-Never was it flain'd, 'till now;

But, when it wears thy blood, 'twill blush for pity.

· Cha. Hold-ere thy courage dares this desp'rate stake,

· Throw not for life on the bad chance of guilt;

(.....

Own but thy falshood-it shall stand forgiven.

- La F. Wittal! thy wife's a wanton—That's truth; keep ' falshood,
- She'll want it for her dowry.

Drawing.

- ' Cha. Oh! my father! 'This was your heart's try'd friend. You lov'd him long;
- · And, with your dying breath, you bad me love him:
- Now, from the grave that hides you from his guilt,
- · If possibly those awful eyes pale beams
- · Can pierce the marble vault—Oh! fee me wrong'd,
- ' And groan reluctant licence to revenge it.
 - · La F. Amen—to that; where the wrong lies, fall vengeance.
- · [Offering the medal.] Here—ere I kill thee—take back what ' thou gav'st me.
- ' Take all that wears thy virtuous father's image;
- 'Take back this kifs-worn paper—Shou'd thy fword
- · Force a fuccess thy crime's bad cause disclaims,
- "Twould, if I then retain'd that good man's gift,
- Seem drawn against thy father. Take it from me;
- · Tear it, and scatter it in air-for ever;
- · So has thy rashness torn the love that bound us.
 - · Cha. What would this paper teach me?
 - La F. Teach thee—nothing;
- · Distraction will not learn—it shuns to hear.
- 'Tis the dear grateful oath he fign'd and gave me,
- · On the victorious evening of a day,
- 'Thou dar'ft not hear me name without a blush.
- · When cover'd o'er with blood, from wounds ill earn'd,
- · In thy unthank'd defence—Then fall'n and hopelefs,
- · Half trampled into earth beneath the hoofs · Of fiery Vileroy's barb'd iron fquadron;
- · He fnatch'd me to his breast—hail'd my sword's labour.
- · He wept, kind man! wept tears of grateful joy-
- Gave that feal'd, written oath, to pay me greatly;
- ' Or, shou'd he die unable, leave th' oblig'd in charge,
- ' (I fcorn to name him) bound himself to pay me.
- · Well has he paid his father's vow !- Quick-tear it,
- · Let not the bond upbraid thee. Cancel that,
- · Since thou hast blotted me; then, if I fall,
- · The payment I declin'd in life—dies too.
 - · Cha. [Drops his sword] Oh! all ye blissful angels who · have feen me.
- What horror am I 'scap'd from!
 - 'La F. Raife thy fall'n point.
 - ' Cha. Not for a thousand wrongs wou'd I resist thee.
- · Perish th' unlist'ning rage of human pride,
- · That burns up kind remembrance !- Wound me-kill me;

"Tis but to take your own—the life you fav'd me.

· Generous La Foy! -- brave hearts make room for pity :

· Say but I'm pardon'd, and I'll dare look up,

· Meet thy offended eyes - and hear thee chide me.

Why was love touch'd too roughly?

La F. [Putting up his favord.] Did I?-Faith,

I half begin to doubt I was to blame-

But 'twill be always thus in womens matters;

· Clap one of those white make-bates 'twixt two pigeons,

'You turn 'em into vultures!
'Cha. You fay ftrangely,

My wife gave wanton freedoms, to the fon

Of my worst enemy?—Sure 'twas impossible!
 La F. Likely enough—We'll walk, and waste an hour.

· On some fresh subject; air our glowing bloods,

'Till they grow cool as reason; then resume

- That feathery theme, and find its weight anon.
 Think—have you mark'd no favour from her eye,
- When it furvey'd Aumele?
 Cha. Aumele has long
- · Made boast of her attachment to his folly;
- But, as 'twas folly taught him to believe it,

I charg'd it to his lightness .- Yet-'twas odd,

When the priest join'd our hands, she dragg'd her's back,

Trembling and cold: then rais'd it to her eyes, Cover'd an ill-tim'd tear, and figh'd profound.

- Let me confider [Pauses, La F. Do: and this do further.
- If she has guilt, and you dare search it boldly,
- " Trust my advice-Make light of my grave jealousy:
- Laugh when you tell it her-Call it the blunder
- " Of an uncourtly taste, not broke to gallantry.
- 'I will contrive Belgard, the honest hater
- Of Aumele's shameless riots, shall be sent,
 As from his father, to require your presence
- For two whole days, to wait th' assembled states.

Obey the fummons with affum'd regret,

- ' Mourning fuch tedious absence. Then take leave,
- 4 And go no farther than to Belgard's brother's.
- But have a care—women have fubtle piercings;
 Kifs warm at parting—closer—longer—kinder:
- Squeeze a more hard, blind lover's hug, than ever.
 - · Cha. I will.
 - La F. Then leave the rest to me.
 - · Cha. Oh! what a blis might marriage hopes create,

Were but its joys as permanent as great!'

The fourth act is short and busy; and in this, the imagination is finely harrowed. La Foy has traced Aumele into the countess's chamber: he is joined by the impatient Chalons, who, maddened by this information, snatches his friend's sword, and hastens to the satal scene. Mean while La Foy apprehends and confines the confidente in a closet. Chalons returns, his sword drawn and bloody.

La F. Eyes horrid! mien confus'd-and that fword bloody,

· Make needless all enquiry.

· Cha. He is dead.

La F. Alas! too fure you found him! Oh, 'twas thoughtless!

What will his father, what Valdore, what law,

' Misjudging censure, and the public tongue,

What will the world and heav'n-conceive of this?

· Cha. I did not kill him basely.

La F. Where is your wife?

· Cha. I've given her to the wind-They'll blow her name

Round the four borders of her country's fcorn.

- · La F. Joyless Chalons !- You kill'd him in her bed?
- 'Cha. No, not in bed—I found him kneeling near it.
 'He figh'd, and kis'd her hand with amorous boldness,

" Mutt'ring his transports o'er it. Oft, in yain,

' He try'd to interrupt her torrent rage

· Of agoniz'd reproach, and conscious shame.

' Cruel, unkind Aumele! I heard her fay;

· How can I fee the fun, when day-break comes?

· How meet my injur'd husband's dreaded eyes,

My reverend father's tears, my friends difdain,

The hoot of the light rabble's cutting fcorn,

- And all the killing anguish I must owe thee?
 Go—for if here, by some disast rous chance,
- Discover'd—'twill undo me. Patience bore it,
- · Even to this madding length-'twas all it cou'd,

· And I was tame no longer.

· La F. 'Twas indeed

· Too much for injur'd excellence, like thine,

· To bear, from blind depravity of tafte,

· That left to feed upon a boundless lawn,

' And brows'd on a dry common!
' Cha. Out, at once,

- Burst my relentless rage. Swift stept I to him,
- Sending thy honest sword before—That ne'er,
 'Till then, had arm'd a hand unworthy. Take,
- · I cry'd, regardless of the shrieks she rais'd,
- Take a defence undue-protect thy vilenefs-

· Nor let me basely kill, though basely wrong'd.

"He rose-leap'd back, and wonder'd-Paus'd, stood dumb,

And, for a while, declin'd his urg'd defence.

- "I should not," he began—and purpos'd more,
 "In such a cause as this"—I stopp'd him short—
- · Pour'd in reproach, and rous'd him into firmness.

· He, in his turn, grew hot-came fiercely on-

Met the vindictive point—Sigh'd loud, and fell.
La F. Trembling I ask—rash, violent Chalons!

· Ask with a friend's too apprehensive dread;

Afk, fince I must prepare my ear for anguish,

What follow'd this beginning?—The offence

Was bitter-bitterer still th' offender's fate!

Oh, 'twas enough !—and ask'd no weak partaker.

' Cha. Ease that ungrounded pain—I could not wound her.
' Oh! had'st thou seen, and heard, thou had'st not fear'd it.

· Speechless with horror-wasting fruitless tears;

"Trembling, with force that shook the curtain round her;

Wringing her hands, in half-rais'd attitude,

And bending o'er the bed, through night's pale gleam,

· She mark'd the bleeding form, and ey'd it ghaftly.

- "Cruel, loft, fhameless wanton!——Oh!" I cry'd,
 "I want a name to speak thee!—Shou'd I kill thee,
- " What marble heart of censure durst reproach me:
- " But I remember what thou, wanton, did'ft not;

"And, for thy fex, I spare thee. Be this room Thy prison, 'till that venerable judge,

"Thy own shock'd father, sentence or release thee."

' There, as turn'd to go, th' unhappy ftarter

Sprung from her pillow, caught my feet, and held 'em;

* Clung, like her beauty's influence, fast and painful;

Hung her dragg'd weight on my retarded knees,
That, trembling, fcarce fuftain'd me. At the door,

Fainting and hopeless, she relax'd her hold.

I fnatch'd the afflicting moment, shook her from me;

* And, prison'd in her chamber, left her captive,

* Companion of a flatterer cold and dumb,

And now grown tafteless of a lady's liking.
La F. Poor, poor Amelia! what a fate is yours!

· How fall'n, from yester morning's awe-mix'd shine,

· Of white untainted beauty-Since 'tis thus,

· I must approve the sad appeal propos'd,

- ' To an impartial judge, at once, and father:
- His influence too, in your judicial process,
 Will balance, and 'twill all be needful there,
- The vengeance of a judge less just than he.

· Cha. Too generous, ill-rewarded, lov'd Valdore!

How shall my fick'ning foul find strength to meet him!

'I cannot—'Tis impossible.
'La F. 'Tis necessary:

- Leave to my care that melancholy duty;
- ' I'll bring him first prepar'd to stand the shock.
 ' Cha. But break not in on his too short repose:
- * Shake not his unfuspecting heart abruptly;
- Wait 'till his usual hour of waking comes:
- "Twill be too foon, however long delay'd,

To figh fuch forrows to him.

' La F. I'll go listen.

[Exit.

- 6 Cha. Oh what a change can one short hour bestow!
- · To bury man's best hopes in endless woe!
- Beauty's frail bloom's a cheat! Valour's brief fame
- ' An empty found—the shadow of a name!
- ' Riches are envy's bait-Scorn haunts the poor-

' In death alone, from pain we rest secure.'

On the whole, we will venture to fay, that this is far from being the worst tragedy which has appeared of late years on the stage; and, with a very little alteration, might, in our opinion, be made a fine acting performance.

ART. III. Indifference for Religion inexcusable, or a serious, impartial, and practical review of the certainty, importance, and harmony of religion, both natural and revealed. By Samuel Squire, D. D. Clerk of the closet to his Royal Highness the Prince of Wales. 8vo. Pr. 4s. Dodsley.

Let us reason cautiously, pronounce modestly, practise sincerely, and hope humbly: To do this is to be wise and good; and to be wise and good is better far than to be a philosopher, a metaphysician, or even a divine. Bolingbroke's Works, vol. iii. p. 384.

Wales, and a preface. The intent of the author is so explicitly set forth in the title itself, that it renders unnecessary any extract of the preface, which is a kind of expansion of it. The motto being taken from lord Bolingbroke, may be justly understood to be a fair appeal to the admirers of that writer, who is not supposed to be a friend to revelation; for the establishment of it, not being inconsistent even with his rules and sense of things, nothing promises more candor than such a treatment of an enemy.

The whole work is divided into eighty-eight fections. The author begins, very properly, with establishing the exist-

ence of God, and with overthrowing the abfurdities of atheism. For a sample of his manner of argument thereon, and, implicity of his style, we shall select for extracts the fifth and sixth sections.

' The man, whose power of imagination will permit him to conceive, that the most excellent pieces of human art, skill, and industry; the most magnificent palaces, for example, * the most exquisite historical pictures, and the most useful and complicated machines, might have been built, painted, and constructed without any previous plan, contrivance, or forefight: the man whose wild and extravagant fancy, will suffer him feriously to suppose, that the celebrated labours of a · Homer, a Shakespear, or a Milton, might have been comoposed by throwing together at random, as fate or hazard directed, the different elements of the alphabet—fuch an one indeed, could be be found, might still go on to fancy (for be-· lieve I am fure he could not) that this most beautiful structure of the human body (not to mention the other parts of the vifible world) might have been framed by chance; that rastionality, judgment, and free-will, might have been ground or pounded out of the infinitely small, round, and smooth · particles which compose the general mass of matter; and that · life, fense, felf-motion, memory, reflection, abstraction, and all the other wonderful faculties of the foul, might have had on other fource, cause, or original, than the fortuitous concourse, collision, and concretion of inanimate atoms.

' But abfurdities beget abfurdities, whilst we are viewing the arguments of atheism, and one impossibility grows out of another. If fate, or hazard, or nature, or an innate energy · inseparably residing in the universal matter (call it by what name you will) after an infinity of changes of form and place, did, at length, produce that immense variety of animals, which float in the fummer-air, and which cover the furface of the earth, all of them completely furnished, as we see they are, with the parts necessary both to preserve their own existence, and to continue their feveral kinds; may it not reasonably be demanded, how it comes to pass, that this plastick efficacy having attained the exactest, and most artful symmetry and ftructure for her feveral creatures, and lodged them in places · most convenient to nourish them, has ever fince desisted from her arduous labour? How it comes to pass, that animals are · not still produced, in the original way, by fermentation and putrefaction, and yet that their feveral species are regularly continued without addition or diminution? Why does not this plastick nature still go on to make men without hands, feet, or heads, as she must be supposed to have done, in the infinite · diverfity

diversity of her first terrestrial productions, before she arrived at the state of perfection, in which we see her works appear

at present? What was there of motion, moisture, and ferti-

Ity in the earth formerly, with which it is not now endued?
Or will you suppose that this plastick energy, knowing that it

is impossible for her to add any thing to the perfection of her

feveral creatures, has therefore prudently given over making any more experiments? But is not this to allot wisdom and

design to a cause, of whose essence it is to be, and to act,

without wisdom and defign?

But let it be granted, for argument's fake, that this ideal nature, after an infinity of tryals, might, by we know not 4 what casual coincidence, commixture, and co-operation of · causes and effects, produce one man, and one of each tribe of animals! But is it possible, even for the most extravagant imagination of the most extravagant visionary, to conceive, that fhe should be able to produce two of each species? and that of these two, one of them should be a male, and the other a female? and that they should come into being just at the fame time, and at the same place? and that that place should 4 be previously furnished with all the conveniencies of proper warmth, food, and water, fo necessary both to supply the wants of creatures, who had nothing elfe but the mere fense of feeling for their direction, and to screen them likewise from that numerous train of accidents, which attend animal life in its infancy? In fpight therefore of all which either reason or fancy can invent to the contrary; let every vain imagination of scepticism be indulged with the most favourable examination; let every prejudice of education and custom be entirely thrown away: yet still shall we find ourselves under a moral s incapacity of banishing from our minds the notion of a selfexistent, all-powerful, and all-wise Being, the Creator and Father of all things. We cannot even open our attentive eyes, for a moment, but the idea of a God will immediately rush in and force itself upon us, and we shall feel ourselves under an utter incapacity of feriously doubting of his existence. All observation, all knowledge, all science leads us to own this fundamental truth; and the universal reception, which it has met with from all forts of thinking people, in all ages of the world and in all places, manifeftly evinces, that it is entirely fuitable, proportionate, and agreeable to the general conception and reason of mankind.'

From thence the author naturally proceeds to a descant upon his attributes, and the continual government of his providence; and sums up the whole in the following succinct profession of faith with respect to that being, into the confession of which he

draw

draws his reader, from inevitable conclusions. 'You are fully convinced, you say, there is a God; and that this God is a being

of all-conceivable perfections, felf-existent, eternal, omnipotent, omniscient, every where present, all-wise, and all-good; and that his

attributes are of the same kind with the qualities of a similar denc-

mination in man, though infinitely different from them in degree.

"You say moreover that you sincerely believe, that the Lord God Almighty still continues to preside over it by his providence, and to

" rule immediately in the kingdoms of men, whenever he fees proper,

by extraordinary interpofals of his power.'

After establishing the above preliminaries, the author goes on to affert the certainty of a future state, and of the punishments and rewards therein. Here he introduces the imperfection of the notions of heathen philosophers, of the Grecian Socrates and the Chinese Consucius, and of their authority compared with that of the missionaries of the gospel. The arguments in favour of its divine revelation, and the proofs thereof, follow in due order, with occasional resutations of insidelity on that head.

His requisites for establishing the degree of faith in miracles are proposed in thirteen questions contained in the forty-eighth section; of which, as a further specimen of the nature of the

work, we subjoin an extract. ' If then the miraculous facts, which are proposed for our belief, and upon the credit of which the divine authority of a · particular fystem of doctrines and precepts depends, are such, 1. As do not imply a felf-contradiction in them: 2. If they appear to have been done publickly, in the view of a great · multitude of people, and with a professed intention to establish • the divine authority of the person or persons who did them: 4 3. If they were many in number, frequently repeated and con-' tinued for a feries of years together: 4. If they were of an interesting nature in themselves, likely to have made strong impressions upon the minds of all who saw and heard of them, and, for that reason, probably, much attended to, talked of, and examined into, at the time of their performance: 5. If the effects produced by them were not transient, but lasting; · fuch as must have existed for many years, and were capable, all the while, of being disproved if they were not real: 6. If they were committed to writing, at, or very near, the time, when they are faid to have been done, and by perfons of undoubted integrity, who tell us that they had been eye-wit-

nesses of the events which they relate; by persons, who, having sufficient opportunity of knowing the whole truth of what they bear testimony to, could not possibly be deceived

themselves; and who, having no conceivable motive nor temptation to falsify their evidence, cannot, with the least

· hadow of probability, be suspected of intending to deceive

other people: 7. If there be no proof, nor well-grounded ' fuspicion of proof, that the testimony of those, who bear wite ness to these extraordinary facts, was ever contradicted even by fuch as professed themselves open enemies to their persons, characters, and views, though the facts were first published upon the spot, where they are faid to have been originally ' performed, and amongst persons who were engaged in pri-' vate interest, and furnished with full authority, inclination, and opportunity, to have manifested the falsity of them, and ' to have detected the imposture, had they been able: 8. If, on the contrary, the existence of these facts be expressly al-· lowed by the persons, who thought themselves most con-' cerned to prevent the genuine confequences, which might be ' deduced from them; and there were, originally, no other disputes about them, but to what sufficient cause they were to be imputed. 9. If, again, the witnesses, from whom we ' have these facts, were many in number, all of them unanimous ' in the substance of their evidence, and all, as may be collected from their whole conduct, men of fuch unquestionable good sense as to fecure them against all delusion in themselves, and of fuch undoubted integrity and unimpeached veracity, as to place ' them beyond all fuspicion of any defign to put an imposture upon others—if they were men, who shewed the sincerity of their own conviction by acting under the uniform influence of the extraordinary works, which they bore witness to, in express contradiction to all their former prejudices and most favoured ' notions; in express contradiction to every flattering prospect of worldly honour, profit, and advantage, either for them-· felves or for their friends; and when they could not but be ' previously assured, that ignominy, persecution, misery, and even death itself, most probably, would attend the con-' stant and invariable perseverance in their testimony: 10. If ' these witnesses, in order that their evidence might have the e greater weight with a doubting world, (each nation being al-" ready in possession of its own established religion) were them-· felves enabled to perform such extraordinary works, as testified the clear and indisputable interposition of a divine power in ' favour of their veracity; and, after having undergone the feverest afflictions, vexations, and torments, at length laid down their lives, in confirmation of the truth of the facts afferted by them: 11. If great multitudes of the contemporaries of these witnesses, men of almost all nations, tempers, and professions, were persuaded by them, that these facts were really performed in the manner related; and gave the ftrongest testimony, which it was in their power to give, of the firmness of their belief of them, by immediately breaking ' though

through all their ancient attachments, and connections of friendship, interest, country, and even of religion, and by acting in express contradiction to them: 12. If the revolu-* tions introduced in the moral and religious world, fince the · period wherein these facts are said to have happened, have been just such as they would, probably, have been, upon a · fupposition of the truth of them, and cannot possibly be accounted for from any other adequate cause: 13. And, lastly, · if we have all the proof, which the exactest rules of the se-· verest criticism can require, to evince, that no alterations have been made in the original records and writings left us by these witnesses, in any material article of their evidence, · fince their first publication, either through accident or design; · but that they have been transmitted to us in all their genuine · purity, as they were left by their authors.——In fuch a fituation of things, where fo great a variety of circumstances, where, indeed, all imaginable circumstances mutually concur to confirm, ftrengthen, and support each other's evidence; and concenter, as it were, in attestation of the same interesting feries of events, without a fingle argument on the other · fide, but the mere extraordinaryness of the facts—shall we not · be justly accused of indulging an unreasonable incredulity in · denying our affent to them? And will not fuch incredulity be as dangerous as it is ridiculous? If facts attefted in fo clear, · decifive, and unexceptionable a manner, and delivered down · to posterity with so many conspiring signs and monuments of truth, are, nevertheless, not to be believed; it is, I think, · impossible for the united wisdom of mankind to point out any evidence of historical events, which will justify a wife and cau-• tious man for giving credit to them - and, confequently, with · regard to past ages, all will be as clouds and thick darkness to us; all will be hefitation and fcepticism; nor will any ' thing be credible, which comes not confirmed to us by the report of our own fenses and experience. In short, where there is the strongest assurance of the existence of any parti-· cular feries of past facts, which we are capable of acquiring, · according to the prefent frame of our nature, and the state of things in the world, to reject these facts after all, and to pre-· tend to excuse ourselves from not believing them, upon the · bare suspicion of a possibility that they may be false, is a most · abfurd contradiction to the principles of common fense, and to the universal practice of mankind.'

The work winds up with practical inferences drawn from the premisses, for an adherence to faith, and for the proof of it by the tenor of one's conduct. Besides the clearness and elegance of the diction, the force of argument that reigns throughout,

we may fafely pronounce, that few theological works are written with fo much candor, temper, and true spirit of Christianity. Here are no indecent fallies of enthusiasm, or gloomy fanaticism, such as characterize certain new upstart reformers, who, under the mask of a more rigorous methodism, preach a God of all terrors, a God, in short, not such as he undoubtedly is, a God whose goodness is equal to his justice, but a God whom they make themselves, after their own most foul and deformed image of mind. Wretches who erect themselves into facred tyrants, and exact at once a flattering and a lucrative homage from that poor misguided flock of sectaries they frighten, misguide, and fleece. Yet, in the work before us, there is no want of the falutary feverity of admonition, as well of what is to be feared, as of what is to be hoped. There is no temporizing composition with vice or insidelity; no relaxed casuistry. Every thing is decent, pious, and earnest. The folly of morality without religion, or the perhaps more dagerous one yet of religion without morality, is pathetically stated. Nothing however will more clearly demonstrate, that, not in vain, have we commended the christian spirit that breathes throughout this performance, than the following extract, with which we shall conclude; and which must edify every lover of the purity, charity, and meekness of the gospel-doctrine.

But upon whatever motives the oppofers of Christianity · may be supposed to act; whether they are inspired by vanity, or malevolence, or a defire of stilling the clamours of an uneafy conscience: it certainly behoveth all those, who are * really convinced of the divine authority of the gospel, to endeavour to do it honour in all things. To you, therefore, do I now especially address myself, who are Christians in deed, and not in appearance only: it is your duty, as you respect the glory of God, the credit of that name by which you are ' called, your own happiness, and the welfare of society, to enquire, to know, and to make use of the best and · most effectual means to baffle the arguments of the adverfaries of your faith; and to reduce them, if possible, to a ' perpetual filence. A warm and honest heart, a heart full of · zeal for the interests of religion, will be ready to reply at once; · pursue and punish these baptized insidels as pests of society; and the common enemies of mankind. Let them feverely fuffer, as manifest opposers of the truth, either in their ' pockets, or their persons-But what will you do to lay them ' under a legal conviction? or how will you be able to diffinguish justly, betwixt real and affected doubts; betwixt an impartial fearch after truth, and malicious cavilling; between conscientious scruples and solemn ridicule? It is impossible

for the wifest body of written laws to reach to every kind and degree of profaneness and blasphemy; and so skilful is the feorner become in the most crafty ways of communicating his fentiments to the public, that he is able to throw a contempt " upon the established religion by mere winks, hints, and infi-* nuations; that, by a pretended approbation and defence of • the gospel, he can expose it to the laughter of the vicious, and the indifferent; that he can affront his Maker by quoting his own words; and, like Judas, come to Christ with a hail and a kifs, at the fame time that he is basely intending to betray him. Are you then for erecting a court of justice for the particular trial of blasphemy and irreligion? are you for fetting up a high-commission court, a court of judicature with full authority to receive all complaints against the oppugners of the established religion; to enquire into the series, tenour, and connection of their books and discourses; to examine the motives, ways, and manners how the offensive expressions were uttered; to confider the antecedent characters and behaviour of the accused; and, at their discretion, to deter-• mine, whether they are guilty of profaneness or not? Such a · method of proceeding with infidelity might, indeed, be of effential fervice to the cause of true religion, could we be sure of a court of inviolable integrity; could we be fure to have · men continually prefiding in it free from all danger of corruption; men upright and impartial; men of a found and · well-informed understanding; men of true magnanimity, void of felf-interest, and without malice on the one hand, or mis-4 taken zeal on the other. But, until this fundamental point can be secured, every person of candour, benevolence, and ex-· perience in the history of the world, will be against an arbi-· trary and despotic power as well in church as state, as well in religious as civil matters, under whatever amiable shape or · form it may appear, or for whatever good purposes it may be · piously intended. We have seen the Roman pontists defacing, and almost destroying, the christian institution by the exercise of fo exorbitant a jurisdiction over the consciences of their brethren: and should any other set or society of men (in the * present state of human weakness and impersection) be ever in-· trusted with so extensive an authority, we shall soon see them · passing on from insidels to heretics; from scoffers at the com-" mon faith to honest enquirers after truth; from bold blas-· phemers to modest differers. It will not be long before we · feel them growing into all the cruelty of an inquisition; and, e perhaps, upon any unexpected turn of public affairs, info-· lently punishing what they were originally intended to protect; and branding that profession of faith as schism, which

- it is now prophaneness to oppose. Let it be added, likewise,
- ' that nothing can be more repugnant to the spirit of genuine
- * Christianity, than for its doctrines to be either proved, or
- maintained, or propagated by force and violence. The religion of the mild, gentle, humble, felf-denying, and benevolent
- ' Jefus, utterly disclaims, and condemns, all harsh methods of
- * proceeding, where the rights of conscience are concerned;
- his gospel needs not any such support, and the defenders of
- it (were they thoroughly acquainted with the strength of
- " their cause) might justly hold them in contempt."

ART. IV. Continuation of the Philosophical Transactions, Vol. L.

THE thirtieth article consists of remarks on the opinion of Henry Eeles, Esq; concerning the ascent of vapour, published in the Philosophical Transactions, vol. XLIX. part I. page 124.

Dr. Darwin, the author of these remarks, undertakes to refute the hypothesis of Mr. Eeles, who supposes that every particle of vapour is indued with a portion of electric fire; and that there is no other sufficient cause assigned for the ascending of vapour. The doctor observes, that the immense rarefaction of explosive bodies by heat, depends either on the escape of air before condensed in them, or on the expansion of the constituent parts of these bodies. Where air is emitted, it cannot be condenfed again into the fame bulk by cold; but, the expansion of heated parts of bodies, as foon as the heat is withdrawn, reases to exist. Nitre in detonation emits great quantities of air not afterwards condensible to the like space: the fame is true of all the folid parts of animals and vegetables. But this is not the case with water, which being immensely rarified in the fleam engine, is inftantly condenfed by a fet of cold water: a circumftance which Dr. Darwin apprehends, could not happen, if the rarefaction was constituted of escaped elastic He adduces feveral arguments and experiments to support his own hypothesis, that the little spherules of vapour will, by refracting the folar rays, acquire a constant heat, though the furrounding atmosphere remain cold; and that this heat will be fufficient to support them when raised, at a given height. In his second letter, he detects the fallacy of the experiments tried by Mr. Eeles; and concludes, that though clouds may fometimes possess an accumulation of electricity, yet this is only an accidental circumstance, and not a constant one; and thence can have no possible influence either in the elevation or support of them.

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Vol. VI. July 1758.

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What

What follows is an account of a new discovered species of the snipe, illustrated by a plate from a drawing of Mr. George Edwards.

This is followed by an elaborate Latin essay on corallines, the polypes that inhabit them, and other sea-animalcules, by Dr. Job Baster, a Dutch physician and philosopher. This gentleman has taken abundance of pains to prove that corallines are vegetables: he supports his hypothesis with arguments, experiments and drawings; but after all, Mr. Ellis, in the very next article, overthrows his whole theory, and reduces them again to the state of animals.

In article xxxiv we find a curious mathematical investigation of the mechanic powers used in raising the head of the Royal William, a first rate ship of war, in Portsmouth dock, by Mr. John Robertson. Next comes a simple account of a nocturnal iris, by Mr. George Edwards. Then we are informed by Dr. Alexander Garden, of South Carolina, that the opuntia or prickly pear given to children, tinged their urine of a lively red colour; and being eaten by a negro nurse, coloured the cream of her milk. He likewise tells us, that the cochineal insects are found upon this plant, which grows abundantly about Carolina.

The succeeding article is an account of a shower of black dust, that fell in the island of Zetland, October 20th, 1755, about ten days before the dreadful earthquake at Lisbon: it happened between three and sour in the afternoon, the sky being very hazy. The dust resembled lampblack, and smelled

strongly of sulphur.

This is followed by a description of some thermometers for particular uses, by the right honourable Lord Charles Cavendish, V. P. R. S. One of these is designed for shewing the greatest degree of cold which happens in any place during the absence of the observer: another is intended for shewing the greatest cold which happens in any place during the time the instrument is left in it. As the description of these instruments, refers to the figures of them in a plate, it cannot be inserted here with any

In the thirty-ninth article, we find different accounts of a 'very remarkable Lusus Natura, of twin fisters joined together in a wonderful manner by the os facrum. They were born in Hungary in the year 1701, were, as they grew up, taught different languages, as well as other feminine accomplishments; travelled through various countries, and died together at the age of twenty-two. As an account of this phænomenon had been published many years ago in English and Latin, we cannot see the propriety of inserting it now among the Philosophical Transactions of the last year: nevertheless,

as the subject is curious, and many of our readers may not have feen those descriptions, we shall quote some of them for their entertainment.

- 'I. Partus hic bicorporeus fingulare exemplum exhibet admirandarum virium imaginationis maternæ in fætum utero con-
- tentum. Mater enim hujus bicorporis, primis graviditatis fuæ menfibus vel potius hebdomadis, attentius contemplaba-
- tur canes coëuntes, arctius cohærentes, et capitibus erga se in-
- vicem quodammodo conversos, eosque sibi crebrius præfigu-
- · rabat.
- 'II. In partu, primum prodiit umbilicotenus Helenæ corpus;
- post tres demum horas editi sunt ejus pedes, cum adnexo cor-
- opore altero Judithæ. Helenæ corporis statura erat altior et rectior, Judithæ brevior et obliquior; et quamvis infra lum-
- bos, a tergo, in unum corpus concretæ fuissent, attamen vultu
- et corporibus, semilateraliter, erga se suerant conversæ, ut
- commode federe, lentoque gradu procedere et recedere po-
- tuerint. Unus communis ipsis erat alvi exitus, intra duas
- nates, seu Helenæ dextrum et Judithæ sinistrum semur, situa-
- tus. Unam quoque habebant vulvam, intra quatuor pedes
- reconditam, ut dum erectis starent corporibus, ne vestigium
- ejus conspicuum esset. Quoad duos istos excretionum mea-
- tus, observatum est, quod, una excretionem alvi moliente,
- ' altera quoque nisum egerendi senserit ; in reddenda vero uri-
- ' na, quælibet, diverso tempore, stimulos habuerit : quamo-
- brem altera ad urinæ missionem solicitata, altera subinde re-
- cessum negavit. Unde in juventute, utut alias semper semet
- tenerrime amarent et amplexarentur, sæpius altercationes inter
- ' ipsas exortæ, et alterutra aliam vel dorso injectam abripuit,
 ' vel colluctando eo, quo vellet, protraxit.
- 'III. Anno ætatis fexto, Judithæ paralyfis totius partis fini-
- ftræ; obtigit ex qua affectione, utut convaluisset, per totam
- ' vitam suam debilior, tardior, et stupidior perstitit; e contra ' Helena semper agilior, docilior, et formosior suit.
- 'IV. Prout diversa erant corpora, ita functionum vitalium,
- animalium, et naturalium, magna in utroque corpore, tam in
- fano quam ægroto statu, observata est differentia. Et quam-
- vis variolas et morbillos uno eodemque tempore habuissent,
- reliqui tamen morbi eis non erant communes. Cum Judith fæpius convelleretur, Helena nec alterata nec debilitata fuit.
- 'Helena erat pleuritica. Judith benigniore febre laboravit:
- alterâ tusti, catarrho, colicâ afflictâ, altera sana exstitit. Hinç
- etiam quælibet, pro suo diverso statu, diversis medicamentis
- · tractabatur : phlebotomia autem semper in saniore et vege-
- 6 tiore celebrabatur.

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This is followed by an elaborate Latin essay on corallines, the polypes that inhabit them, and other sea-animalcules, by Dr. Job Baster, a Dutch physician and philosopher. This gentleman has taken abundance of pains to prove that corallines are vegetables: he supports his hypothesis with arguments, experiments and drawings; but after all, Mr. Ellis, in the very next article, overthrows his whole theory, and reduces them again to the state of animals.

In article xxxiv we find a curious mathematical investigation of the mechanic powers used in raising the head of the Royal William, a first rate ship of war, in Portsmouth dock, by Mr. John Robertson. Next comes a simple account of a nocturnal iris, by Mr. George Edwards. Then we are informed by Dr. Alexander Garden, of South Carolina, that the opuntia or prickly pear given to children, tinged their urine of a lively red colour; and being eaten by a negro nurse, coloured the cream of her milk. He likewise tells us, that the cochineal insects are found upon this plant, which grows abundantly about Carolina.

The succeeding article is an account of a shower of black dust, that fell in the island of Zetland, October 20th, 1755, about ten days before the dreadful earthquake at Lisbon: it happened between three and four in the afternoon, the sky being very hazy. The dust resembled lampblack, and smelled

strongly of sulphur.

This is followed by a description of some thermometers for particular uses, by the right honourable Lord Charles Cavendish, V. P. R. S. One of these is designed for shewing the greatest degree of cold which happens in any place during the absence of the observer: another is intended for shewing the greatest cold which happens in any place during the time the instrument is left in it. As the description of these instruments, refers to the figures of them in a plate, it cannot be inserted here with any

propriety.

In the thirty-ninth article, we find different accounts of a 'very remarkable Lufus Natura, of twin fifters joined together in a wonderful manner by the os facrum. They were born in Hungary in the year 1701, were, as they grew up, taught different languages, as well as other feminine accomplishments; travelled through various countries, and died together at the age of twenty-two. As an account of this phænomenon had been published many years ago in English and Latin, we cannot see the propriety of inserting it now among the Philosophical Transactions of the last year: nevertheless,

as the subject is curious, and many of our readers may not have seen those descriptions, we shall quote some of them for their entertainment.

- 'I. Partus hic bicorporeus fingulare exemplum exhibet admirandarum virium imaginationis maternæ in fætum utero con-
- tentum. Mater enim hujus bicorporis, primis graviditatis
- fuæ mensibus vel potius hebdomadis, attentius contemplaba-
- ' tur canes coëuntes, arctius cohærentes, et capitibus erga se in-
- vicem quodammodo conversos, eosque sibi crebrius præfigu-
- 'II. In partu, primum prodiit umbilicotenus Helenæ corpus;
- post tres demum horas editi sunt ejus pedes, cum adnexo corpore altero Judithæ. Helenæ corporis statura erat altior et
- rectior, Judithæ brevior et obliquior; et quamvis infra lum-
- bos, a tergo, in unum corpus concretæ fuissent, attamen vultu
- et corporibus, semilateraliter, erga se fuerant conversæ, ut
- commode sedere, lentoque gradu procedere et recedere po-
- tuerint. Unus communis ipsis erat alvi exitus, intra duas
- nates, seu Helenæ dextrum et Judithæ sinistrum semur, situa-
- ' tus. Unam quoque habebant vulvam, intra quatuor pedes
- ' reconditam, ut dum erectis starent corporibus, ne vestigium
- ejus conspicuum esset. Quoad duos istos excretionum mea-
- tus, observatum est, quod, una excretionem alvi moliente,
- ' altera quoque nisum egerendi senserit; in reddenda vero uri-
- na, quælibet, diverso tempore, stimulos habuerit: quamo-
- brem altera ad urinæ missionem solicitata, altera subinde recessum negavit. Unde in juventute, utut alias semper semet
- tenerrime amarent et amplexarentur, sæpius altercationes inter
- ' ipsas exortæ, et alterutra aliam vel dorso injectam abripuit,
- vel colluctando eo, quo vellet, protraxit.
- 'III. Anno ætatis fexto, Judithæ paralysis totius partis siniftræ; obtigit ex qua affectione, utut convaluisset, per totam
- vitam suam debilior, tardior, et stupidior perstitit; e contra
- · Helena semper agilior, docilior, et formosior fuit.
- 'IV. Prout diversa erant corpora, ita functionum vitalium,
- ' animalium, et naturalium, magna in utroque corpore, tam in
- ' fano quam ægroto statu, observata est differentia. Et quam-
- 'vis variolas et morbillos uno eodemque tempore habuissent, reliqui tamen morbi eis non erant communes. Cum Judith
- · sæpius convelleretur, Helena nec alterata nec debilitata fuit.
- ' Helena erat pleuritica. Judith benigniore febre laboravit;
- ' alterâ tussi, catarrho, colicâ afflictâ, altera sana exstitit. Hinç
- etiam quælibet, pro suo diverso statu, diversis medicamentis
- · tractabatur : phlebotomia autem semper in saniore et vege-
- ' tiore celebrabatur.

V. Anno ætatis decimo fexto, menstrua comparuerunt. quæ deinde per totam vitam, non tamen æquali tempore, modo, et quantitate successere. Subinde alterutra majores hinc fenfit molestias; Judith vero crebrius convellebatur, variisque

hyftericis et pectoris affectionibus obnoxia fuit.

VI. Anno ætatis vicesimo secundo, seu A. C. 1723. die 8 · Febr. Judith fortiter convulsa eit, postea comatosa, usque ad ' mortem, quæ die 23 Febr. mane contigit, perstitit. Intra hos dies Helena febricula laboravit, eique accesserunt crebriores lipothymiæ, quibus tandem ita debilitata est, ut integra quamvis mente et loquela, subito, tribusque horæ minutis ' prius quam Judith, in agonem inciderit : pestea vero ambæ, opost brevem agonem, uno ferme momento expiraverint.

'VII. Corporibus post mortem dissectis, reperta sunt in quo-· libet corpore vifcera fingula: In Helena omnia fana; in Judithæ thorace vero cor nimis magnum, fortissimo pericardio velatum, et pulmonum dexter lobus putridus: Arteria aorta • et vena cava ex utroque corde descendentes, antequam arteriæ et venæ iliacæ ex iisdem emergerent, inflexæ coadunabantur, et unam arteriam aortam, unamque venam cavam, e corde uno ad aliud procedentes seu reflexas, præsentarunt. In ab-' domine utrinque viscera omnia sana et integra. Quodlibet · corpus fuum habuit hepar, splenem, pancreas, renes, vesicam, ' uterum cum ovariis, tubis Fallopianis, et portione vaginæ, quæ utrinque concurrentes unam communem vaginam effor-· marunt. Partes genitalium externorum, præter commune orificium vaginæ, cuilibet erant propriæ, velut clitoris, ' nymphæ, orificium urethræ; alæ seu labia utrinque ad perinæum concurrentia fosfulam navicularem densiorem constituerant. Ventriculus cum intestinis, in utraque, naturaliter erant situata; intestina recta autem utrinque ad os sacrum reflexa et coalita, unum satis amplum et communem canalem · conftituerunt : os facrum ad fecundam divisionem concretum-· erat, et unum corpus efformando, in uno utrique offi facro-· communi, offe coccygis, terminabatur.

Ex prærecensitis, sicut causa diversitatis actionum et functioe num patet, ita etiam ex arteriarum aortarum, et venarum ca-' varum, intestinorum quoque rectorum et vaginarum uteri, compagine, coadunatione et harmonia, apparet ratio conformitatis et disparitatis morborum, synthanasiæ, communis nisus egerendæ alvi, possibilis imprægnationis alterutrius, vei fors-' utriusque virginis, uno eodemque coitu.

· Hæc omnia conquisivi et retexui partim e relationibus fide 6 dignis autoptarum; partim ex ephemeridibus B. Caroli Raye geri,

- e geri, foceri mei, qui, dum viveret, medicum comobii dicti or-
- dinarium agebat; partim ex libro comobiali, cui B. Vir for-
- mulas medicamentorum inscripserat. Dab. Posonii die 3 Julii
- 1757.

JUSTUS JOANNES TORKOS, · Eques Pannonius, Medic. Doct. et Liberæ Regiæ · Civitatis Posoniensis Physicus ordinarius.

- The interval between the reading of this paper before the
 - · Royal Society, and the prefent publication, was occasioned
 - by the long indisposition, and afterwards death, of their late
- · President Martin Folkes, Esq; who having taken it to his
 - house, with a view of collecting and adding to it some fur-
 - ther particulars, it could not be found after his decease.
- But Dr. Torkos, the writer, being again applied to, im-mediately transmitted the copy of it printed above: and,
- in order to supply in some measure the want of what Mr.
- Folkes's extensive reading and industry might have furnished
- the public with, in relation to fo very remarkable a fact, the
- following accounts, printed and manuscript, are subjoined
- as a supplement to the preceding article.
- * Extract of a Letter of William Burnet, Efg; F. R. S. eldeft Son
- of Dr. Gilbert Burnet, Lord Bishop of Salisbury, to Dr. (af-
- terwards Sir) Hans Sloane, dated at Leyden, May 9, 1708.
 - . N. S.

"SIR,

- " I fend you inclosed the print of a wonderful union of two
- twin fifters, who are at this time to be feen at the Hague. I
- " faw them, and observed all, that I could think tended to ex-" plain the appearance. They are Hungarians, as the lines
- " under the print will shew you. There is there an exact
- enough description of their condition; only I may add, that
- " in fig. 1. the urinal passage is between the two foremost thighs,
- as they are in the print. The same is true of the anus in the
- 2d figure, in fuch manner, that the fituation of these parts is
- " the fame to outward appearance as naturally, with this dif-" ference, that they are between two different bodies here.
- whereas in the course of nature they are between the two
- parts of the fame body. It feems probable, that their parts
- " are distinct; but that the most remote labia of each are out-
- " wardly visible, and the two contiguous ones are within.
- There feems to be no cheat in the thing; and the skin, where
- " they are joined, is perfectly smooth, without any scar. They
- are now about fix years old. They speak French and High

D 3

· German ·

"German. They are very full of action, and talk one more " than the other. When one stoops to take up any thing, she " carries the other quite from the ground; and that one of "them often does, being ftronger as well as more lively than " the other. They have not their feeling common any where " but in the place of their conjunction. This is all I can fay " about it. If you think it worth while, you will do me an " honour in giving the print, and the substance of this ac-" count, to the Society; to which, tho' an unworthy member,

" I would be proud to be capable of any fervice."

'This letter was read to the Royal Society on the 12th of " May, 1708; and the print mentioned in it produced; which, being now extremely difficult to be met with, is thought pro-

· per to be engraved again, and inferted here.

' Soon after the date of Mr. Burnet's letter, the twin fifters ' were brought to England, and publicly shewn in London, as ' appears from the following MS. note in a copy of the print bound up by the writer Fortunius Licetus de Monstris, edit. " Amstelod. 1665. 4to. in the possession of Thomas Wilbra-' ham, M. D. F. R. S. "Londini 14 Junii 1708. has vidi ge-" mellas (plus annis sex natas) quarum forma et vivacitas elegantior

" et vegecior quam pictura et descriptio." Another account of them by an eye-witness in London is in a manuscript volume among those of Sir Hans Sloane, Bart. in the British Museum, intituled, A short history of hu-· man Prodigies and monstrous Births, of Dwarfs, Sleepers, Giants, frong Men, Hermaphrodites, numerous Births, and extreme old age, • &c. The name of the writer was James Paris du Plessis. In . p. 39, under the title Two Sifters conjoined, he gives a drawing of them, and the following description: "These two mon-" ftrous girls were born at Szony in Hungary in the year 1701. "They were born conjoined together at the small of the back. " I asked the father and mother, if they could not be separated " one from the other? but they answered, No; because the " urinary and feecal veffels and paffages were fo united, as to " have but one iffue for the urine, and another for the excre-" ments, betwixt both. They were brisk, merry, and well-" bred: they could read, write, and fing very prettily: they " could speak three different languages, as Hungarian or High " Dutch, Low Dutch, and French, and were learning English. "They were very handsome, very well shaped in all parts, and " beautiful faces. Helen was born three hours before her fifter " Judith. When one stooped, she lifted the other from the " ground, and carried the other upon her back; neither could " they walk fide by fide. They loved one another very tender-

" ly. Their clothes were fine and neat. They had two bo-

" dies,

"dies, four fleeves; and one petticoat ferved to the bodies, and their shifts the same. When one went forward, the other was forced to go backward."

There is another Latin account of the same girls, who are represented in two copper-plates, in this vol. of the Philosophical

Transactions.

The next article is composed of observations on the origin and use of the lymphatic vessels of animals: being an extract from the Gulstonian lectures, read in the theatre of the college of physicians of London, in June 1754, by Mark Akenside, M. D. fellow of the college of physicians, and of the

Royal Society.

The nature and use of the lymphatics have been so fully demonstrated and explained in Dr. Hunter's anatomical courses, and the same doctrine so effectually propagated in a late treatife by Dr. Monro, jun. of Edinburgh, that, in our opinion, it was altogether unnecessary to print this fragment of Dr. Akenfide, especially as that learned gentleman can derive from it no fresh wreath to his reputation; for the extract, though ushered in with all the air of a discovery, is not only crude and superficial, but charged with an abfurd inconfiftency, which we are forry to fee drop from fuch an exalted genius. He fets out with affirming, that the lymphatics may be differded by blowing air, or by injecting water or mercury into an artery. But Dr. Hunter, who must be allowed to know fomething of the art of making fuch preparations, expressly fays, that he cannot inject them as other veins, by filling the arterial fystem, consequently they are not continuations of the arteries. He fome. times observed, indeed, that they were filled with wax, when the arteries burft, and the fluid injection was effused into the cellular membrane. Dr. Monro afferts, that the valvular lymphatic veins cannot be filled by injecting arteries, unless the coats of these arteries be burst, consequently there is no natural communication between the arteries and the lymphatics. Both these gentlemen take it for granted, that the lymphatics are absorbents; and this very opinion Dr. Akenside presumes to deduce from his own reflections on the subject. We shall not pretend to doubt, that this great man actually made the discovery without having received any hints from other people: but we must observe, he is a little unfortunate in point of time, as Dr. Hunter had, for many years before 1755, taught the same doctrine to his pupils. We should, however, be glad to know how he will reconcile his affertion, touching the communication between the blood veffels and lymphatics, with his conclusion, that the lymphatics have their origin among the little cavities of the cellular substance of the muscles, among the mucous folliculi of the tendons, or the membranous receptacles and ducts of the larger glands; and that their bufinese

finess is absorption or reabsorption. How can their mouths open into cavities for the purposes of absorption, if they are no more than continuations of arteries? Let the doctor resolve this

doubt, and then, erit mihi magnus Apollo.

The forty first article is a letter to the right honourable the Earl of Macclesfield, prefident, the council and fellows of the Royal Society, concerning the variation of the magnetic needle, with a fet of tables annexed, which exhibit the refult of above fifty thousand observations, in fix periodic reviews, from the year 1700 to the year 1756, both inclusive; and are adapted to every five degrees of latitude and longitude in the more frequented oceans. By William Mountaine and James Dodson,

fellows of the Royal Society.

In the subsequent article, we have an account of some extraordinary tumours upon the head of a labouring man, now in St. Bartholomew's hospital, by James Parsons, M. D. F. R. S. These excrescences, which are very surprising, the doctor has accurately delineated in two figures engraved for the illustration of the subject. Several of the smaller tumours are already cut off by Mr. Crane, furgeon, and the substance appears to be intirely fat. He proposes the excision of them all, one after another; and as the patient is young and otherwise healthy, we hope he may in time retrieve some appearance of the human face divine, which for the prefent he has intirely forfeited.

The Rev. Mr. Richard Forster, rector of Great Shifford, fayours us in the next article with a calculation, tending to prove that the number of people in England and Wales amounts to eight millions; a supposition, which notwithstanding all he has faid in support of it, we believe to be above two millions wide

of the truth.

This paper is succeeded by a remarkable case of an aneurisin in the principal artery of the thigh, with an account of the uncertainty of the diffinguishing symptoms of this disease, by

Mr. Warner, furgeon to Guy's hospital.

In the following article Mr. Fitzgerald candidly owns, that he was deceived in making the experiments for increasing the quantity of steam in a fire engine, by blowing air through boiling water; which experiments are communicated in the former part of this volume.

The next three articles are composed of observations on a lunar eclipse, and eclipses of the satellites of Jupiter, at Lisbon,

by Father John Chevalier, in the Latin tongue.

What follows is a very remarkable case of the efficacy of bark in a mortification, by Mr. Richard Grindall, surgeon to the London hospital. A woman about the age of thirty, troubled with a quotidian, took about three ounces of a liquid of a pale yellowish colour, by the advice of a barber who pretended to cure

· Whilst

agues. She was immediately thrown into a violent fever, of which, however, she was relieved by a sweat. Then she was troubled with an itching in her hands, seet and nose; and these parts actually gangrened. Being brought to the hospital, she began a course of the bark, which soon checked the progress of the mortification. The gangrened parts sloughed off; her hands were amputated, and she recovered.

The next article confifts of two letters from Dr. Whytt of Edinburgh, the first, containing observations on the lithontriptic virtue of the Carlsbad waters, lime-water and soap. This gentleman, from certain experiments, concludes, that the lime-water is preferable to the Carlsbad waters, as being a more powerful

diffolvent of the human culculus.

The following case, communicated by the same physician, is so curious, that we will insert it verbatim:

An Instance of the Electrical Virtue in the Cure of the Palsy. By
Mr. Patrick Brydone.

Elizabeth Foster, aged thirty-three, in poor circumstances,
unmarried, about fifteen years ago was seized with a violent

- for nervous fever, accompanied with an afthma, and was so ill, that her life was despaired of. She recovered however from
- the violence of her distemper, but the sad effects of it remained.
- · For, from this time, the continued in a weakly uncertain state
- of health till the month of July, 1755, when she was again
- taken ill of the same kind of sever; and after it went off she was troubled with worse nervous symptoms than ever, ending
- at last in a paralytic disorder, which sometimes affected the
- arm, fometimes the leg, of the left fide; in fuch a manner as
- that these parts, though deprived of all motion for the time,
- yet still retained their sensibility. In this condition she remained till the spring 1756, when unexpectedly she grew much
- better; but not so far as to get quite rid of her paralytic
- complaints; which, in cold weather, feldom failed to manifest
- themselves by a numbness, trembling, sensation of cold, and a

· loss of motion in the left fide.

- This paralytic tendency made her apprehensive of a more • violent attack; which accordingly soon happened: for, about
- the end of August, in the same year, her symptoms gradually
- increased, and in a very short time she lost all motion and senfation in her left side. In this state she continued throughout
- · last winter with the addition of some new complaints; for now
- her head shook constantly; her tongue faltered so much, when
- fhe attempted to speak, that she could not articulate a word;
- f her left eye grew fo dim, that she could not distinguish colours
- with it; and she was often seized with such an universal cold-
- s ness and infensibility, that those who saw her at such times

· scarce know whether she was dead or alive.

Whilst the woman was in this miserable condition, observing that she had some intermissions, during which she could converse and use her right leg and arm, in one of those intervals I proposed trying to relieve her by the power of electricity. With this view, I got her supported in such a manner as to receive the shocks standing, holding the phial in her right hand, whilst the left was made to touch the gun-barrel. After receiving several very severe shocks, she sound herself in better spirits than usual; said she felt a heat, and a prickling pain, in her left thigh and leg, which gradually spread over all that side; and after undergoing the operation for a few minutes longer, she cried out, with great joy, that she felt her

foot on the ground.

'The electrical machine producing such extraordinary effects, the action was continued; and that day the woman patiently fubmitted to receive above two hundred shocks from it. confequence was, that the shaking of her head gradually decreased, till it intirely ceased; that she was able at last to stand without any support; and on leaving the room quite forgot one of her crutches, and walked to the kitchen with very little affiftance from the other. That night she continued to be well and flept better than she had done for several months before, only about midnight she was seized with a faintishe ness, and took notice of a strong sulphureous taste in her mouth; but both faintness and that taste went off, upon drinking a little water. Next day, being electrifed as before, • her strength sensibly increased during the operation, and when that was over the walked easily with a stick, and could lift fee veral pounds weight with her left hand, which had been fo Iong paralytic before. The experiment was repeated on the ' third day; by which time she had received in all upwards of fix hundred fevere shocks. She then telling us that she had as much power in the fide that had been affected as in the other, we believed it unnecessary to proceed farther as the · electricity had already, to all appearance produced a compleat · cure. And indeed the patient continued to be well till the · Sunday following, viz. about three days after the last operation; but upon going that day to church, she probably catched cold; for on Monday she complained of a numbness in her left hand and foot; but, upon being again electrifed, every fymptom vanished, and she has been perfectly well ever fince.

* Coldingham, Nov. 1757. PATRICK BRYDONE.

^{&#}x27;That the above is a true and exact account of my case, and of the late wonderful cure wrought on me, is attested by

- I was eye-witness to the electrical experiments made by my
- fon on Elizabeth Foster, and saw with pleasure their happy effects. By the blessing of God accompanying them, from a
- weak, miserable, and at sometimes almost an insensible state,
- " fhe was, in a very short time, restored to health and strength;
- of which the above is in every respect a true account.

ROBERT BRYDONE,

' Minister of Coldingham.

- * Extract of a Letter from Dr. Whytt to Dr. Pringle, relating to this Account: dated Edinburgh, 1 Dec. 1757.
- Some days ago I had transmitted to me Mr. Brydone's ac-
- count (inclosed) of the success of the electrical shocks in a pa-
- ralytic patient, attested by the patient herself, and by Mr.
- Brydone's father, who is minister at Coldingham, in the shire
- of Berwick. At the same time I had a letter from the Rev.
- Mr. Allan, minister of Eymouth (in the neighbourhood) in-
- forming me, that he had examined the patient particularly,
- and found Mr. Brydone's account to be perfectly true. He
- and found Mr. Brydone's account to be perfectly true. He
- further informs me, that he never observed the electrical shock fo strong from any machine, as from Mr. Brydone's. It seems,
- that gentleman has not only applied himself to the study of
- ' natural philosophy, but also of medicine.

' ROBERT WHYTT.'

What next occurs is an account of some fossile fruits, and other bodies, found in the island of Shepey, illustrated with plates, by James Parsons, M. D. F. R. S. This is a curious defert, which, however, we have not tafte enough to relish: nor are we much interested in the subsequent observations upon the comet that appeared last year, in the months of September and October; even though they are made by Dr. Bradley, one of the greatest astronomers of the age: not but that they are extremely valuable to those who are conversant with the motions of the heavens, especially as from these elements (which are adapted to Dr. Halley's general table for the motion of comets in parabolic orbits) he has computed the places of this comet for the respective times of the foregoing observations, as in a table affixed, containing the longitudes and latitudes, deduced from the observed right ascensions and declinations, and also the differences between the computed and observed places.

What follows is the resolution of a general proposition for determining the horary alteration of the position of the terrestrial equator, from the attraction of the sun and moon: with some remarks on the solutions given by other authors to that difficult and important problem, by Mr. Thomas Simpson, F. R. S.

This

This is a very ingenious and learned investigation, conducted

with remarkable perspicuity and candour.

The fifty-fourth article contains remarks upon the heat of the air in July 1757, by Dr. Huxham of Plymouth; from which it appears that, on the 12th day of the month, Fahrenheit's thermometer was above 83 in the shade, that is, eight degrees higher than it had been at Madeira for ten years together.

The two succeeding articles are made up of a controversy between Mr. Philip Miller and Mr. John Ellis, concerning the American Toxicodendron. The first believes this to be the same with the Arbor vernicifera legitima of Kæmpser: the other is of a contrary opinion. Here are their arguments at full length: but, far be it from us to decide between two such in-

genious naturalists.

The next is a fecond effay on the number of the people of England, by the Rev. Mr. Richard Forster, who seems to be warmed with a kind of patriotical refentment against Dr. Brakenridge for his having attempted to prove, that the number of people in this kingdom is not fo great as it has been formerly computed. He has counted the houses in several contiguous parishes, distinguishing those that pay the window-tax from the cottages fo deemed: he has made the like calculation in a market-town; and he concludes, that the number of people now alive in England, exceeds feven millions and a half. He makes another computation from the proportion levied for the militia in the west-riding of Yorkshire; and takes it for granted that we are greatly increased in number since the accession of the present royal family to the throne of these kingdoms. He has examined the registers of several parishes; and finding, upon an average, the proportion of the burials to the baptisms as 83 to 140.4, infers that the people increase in a very rapid manner. He censures the doctor for having given his opinion that all ways to increase our people would be for the public welfare, even the naturalizing of foreigners: he denies the doctor's posttions, that our commerce at fea is one cause of the decay of our fencible men; or that our numbers are in fact lessened by emigrations to our colonies: he concludes with faying the doctor's doctrine is at best ill-timed, while we are contending with our hereditary enemy, pro aris et focis.

The last article of this volume is the answer which Dr. Brakenridge makes to these calculations and imputations. He exposes the fallacy of estimating the number of inhabitants of about 7000 parishes, from a calculation made in nine small parishes that are contiguous; as also of all the market towns in England, from that of Langborne; considering, that every pa-

rish and every town may have a different proportion of poor, according to the various circumstances of their trade and fituation. He observes, that if we were to be directed by a few inflances, we might think there were much fewer cottages than he has allowed: for, in the parishes of St. James, and St. George in Westminster, containing about 7000 houses, there are none; in the country parish of Cheselhirst in Kent, where there are above 100 houses, there are but three cottages; and in many parishes, there is not one in twenty. He fays, that from a late furvey of all Middlefex, London, Westminster, and Southwark included, there are 87,614 houses; of these 19,324 are cottages, and 4810 are empty. By this account it appears, that there are not above 530,000 people in that compass; of which, within the bills of mortality, there die about 25,000 yearly; that is, not less than one in twenty. He confutes Mr. Forfter in his argument with regard to the militia of Yorkshire. He vindicates his former calculation, like a veteran politicoarithmetician: he invalidates his antagonist's calculation, by shewing, that, according to his doctrine, the number of our people would be doubled in five and thirty years, if it were not for our losses; which no reasonable man will venture to say. He afferts, that, in many country places, from their bad fituation, there is very little increase; and, in some towns, none at all; and in others a decrease continually supplied from the neighbouring country; that, within the bills of mortality, there are annually 5000 burials more than births; confequently to maintain our numbers here, there must be a yearly supply of 5000, which destroys the whole increase of fix or seven counties. He justifies his maxim that all means, even to the naturalization of foreigners, ought to be used for the increase of our people: he proves from history and reason, that this was always deemed, and always found, a practicable and effectual expedient: he demonstrates the absurdity of doubting, that our commerce should be one cause of the decrease of our fencible men; and asks, whether his antagonists thinks, that shipwrecks, the inclemency of the fea, or the fcurvy, beget people? Trade increases riches and luxury, but it is far from contributing to the increase of the human species: and we see that, in countries where there is little or no commerce, the people increase faster than in England. With respect to the charge, that his calculations were ill-timed, he replies, that his letters on this subject were read before the Royal Society, and ordered to be printed long before the war was proclaimed. 'But, supposing they had all been printed during the war (fays he): what then? Is a fact to be concealed, that, if discovered, may be · useful to prevent errors in government, and rectify our notions of the economy of our people? What advantage can

our enemies make of fuch a discovery? Will it encourage

them to imagine that we shall be easier subdued, when they

know, by the most moderate computation, we have at least two millions of fencible men in our British islands.

" Enough, furely, to refift them in all their attempts! But I

doubt we are not fo deficient in our numbers as in public

virtue, without which the greatest multitude may be easily

overcome.'

Thus have we, to the best of our power, given a fair, impartial account of the several articles that constitute the first part of vol. L. of the Philosophical Transactions.

Art. II. Twelve Discourses upon some practical parts of Solomon's Song. Preached at St. Dunstan's church in the West, London. By W. Romaine, M. A. Lecturer of the said church. 8vo. Price 5s. Worrall and Withers.

HE most necessary and important business of a true popular middle-ifle preacher in this metropolis is, to catch the ears of the groundlings with fomething new and out of the way: for this purpose they always felect for texts those parts of scripture which others, for reasons sufficiently obvious, as carefully avoid. Mr. Romaine therefore, the celebrated disciple of the learned Hutchinson, has, with great propriety chosen the Song of Solomon for the subject of these discourses, and dedicated them to the parishioners of St. Dunstan's: 'God (fays this pious preacher ' in his dedication) knoweth my heart, and he has feen how ho-• neftly I have preached the word, and how earnest I have been with him in prayer for a bleffing upon it. O that I may deli-• ver my own foul! and God grant you may deliver yours. With what fuccess I have preached you must give an account at the fame awful bar at which I am to be tried, and before a judge who is no respecter of persons. Oh that I may not appear e against any of you in that great day. When that day shall come, then it will be known with what view I have written " this dedication."

Mr. Romaine informs us in his preface, that with regard to the fong, the devil has a particular spite against it; he hates the subject, and he hates the composition; and is always stirring up his agents to speak contemptibly of it. 'But if (says he) a man ignorant of mathematics was to take up Sir Isaac Newton's Principle, and to arresult. What subject this? Who say

ton's Principia, and to cry out, What stuff is this? Who can make any thing of these strange lines and figures, and these

A's and B's? A great mathematician standing by would pity

- 4 the poor man's ignorance. In like manner when any person
- takes up a book upon communion with God, and either does
- on not believe there is fuch a thing, or has had no experience of
- 'it, how can he understand what is written? It must appear to him mere jargon and gibberish; and if he has a talent at
- ridicule, here is a tempting occasion for him to display it.
- Whereas the fault is not in the book, but in the man who
- · reads it.
- 'Whoever fits down to read this book, be he ever so learned
- ' in other matters, yet if he has no knowledge of God's love
- ' to him, he cannot understand what he reads. The objectors
- to this book are so far from pretending to have any of this ex-
- perimental love of God, that they laugh at it and ridicule it;
- whereby they plainly declare, that they are not judges of the
- ' fubject upon which this book treats, and therefore they are
- " not fit to fit in judgment upon it."

of Solomon but himself and his followers, he proceeds to explain it. He tells us, that the design of it is, to describe the mutual love of Christ and his church: it is called the Song of Songs, which is concerning Solomon, i. e. not king Solomon, but the Prince of Peace, Jesus Christ, of whom Solomon was a type and figure. This our learned commentator proves, not from scripture, but from the * argument put before the Song in the Bible, that was in use in the time of Queen Elizabeth. He then proceeds to his interpretation. His first sermon is on the fourth verse of the Song, Draw me and we will run after thee, and contains nothing but jingle and play upon the words draw and run.

'Draw me, Lord Jesus, from the love of the world, and the

"* In this Song (fays the argument above-mentioned) Solomon, by most sweet and comfortable allegories and parables,
describeth the perfect love of Jesus Christ, the true Solomon

- " and king of peace, and the faithful of his church, which
- " he hath fanctified, and appointed to be his spouse, holy,
- " chafte, and without reprehension. So that here is declared
- " the fingular love of the bridegroom toward the bride, and
- " his great and excellent benefits wherewith he doth enrich her
- " of his pure bounty and grace, without any of her defervings.

 "Also the earnest affection of the church which is inflamed.
- "Also the earnest affection of the church, which is inflamed with the love of Christ, desiring to be more and more joined
- " to him in love, and not to be forfaken for any spot or blemish
- " that is in her."

It is observable, that when Mr. Romaine is put to it for a confirmation of his doctrine, he always brings in by way of indisputable authority, the Articles and the Homilies.

things -

things of it; draw me from the love of fin and felf. I feel

my bondage, I find that I am a flave, and am without

· strength to deliver myself. O draw me then by the sweet im-

· pulse of thy good spirit from my bondage and slavery. And

when thou art pleased to set my feet at liberty, then we will

run after thee.

· Can you think yourselves secure whilst there is only this • little light vapour in your nostrils between you and hell?

Lord Jesus forbid it. If any person hear me this day, who

· came hither without any intention to be made uneafy about

the state of his foul, Oh let him now feel the misery of being · feparated from thee the fountain of good, and draw him to

thyfelf, dear Lord, now draw his heart, from fin, and fatan,

from the world, and the things of it, that he may follow me

with profit, and be edified and comforted from what I have to

apply.

And fo forth, throughout the whole fermon. The next discourse has for its text these words, The upright love thee; which runs in the same manner upon the word upright. The fourth sermon, on these words, Awake, O north wind, and come thou fouth, blow upon my garden, that the spices thereof may flow out, be-

gins in this curious manner:

In the foregoing chapter the faithful foul had been in a dull heavy frame, but being concerned and uneasy about it, had defired the quickening influences of Christ's grace. Christ here answers these desires. He calls for the wind to come and blow upon his garden. The wind is the scripture emblem and representative of the Holy Spirit. When he descended upon the disciples on the day of Pentecost, he came in this his * known emblem, in a rushing mighty wind, and it follows, " they were all filled with the Holy Ghoft," filled with his gifts and graces. For the same good purpose his influence is here · required. He is to blow upon the garden with his different operations, to quicken those things, that were ready to die,

blow upon my garden, that the spices thereof may flow out." A little afterwards this great natural philosopher acquaints us with a fecret of a very extraordinary kind. 'The grand agent ' in nature (fays he) is the air, which is one in effence, whether it be rarefied to its smallest parts in the action of fire at the orb of the fun, or feat out in light, or returned in gross air to maintain and carry on this action of fire at the orb of the

and to bring forth the fweet perfumes of the graces of his own

"Awake, O north wind, and come thou fouth-

fun, in which soever of these three distinct operations it be employed it is still air; and accordingly this unity of its effence, and distinction of its threefold agency, is declared in

· fcripture

· scripture to be the instituted type, in which we are to read

the unity of the divine effence and the offices of the three

divine persons.

'The very fame word that flands for the breath we breathe,

• both in the Hebrew and Greek, fignifies the Holy Spirit. Why
• was this the usage of scripture? Was it from the poverty of

these languages? No. It was to shew us the perfect likeness

and resemblance there is between what air does to the body,

and what the Holy Spirit does to the foul.'

All this wild and unintelligible jargon is the doctrine of Mr. Romaine's great master and instructor Mr. Hutchinson, founder of the most absurd and nonsensical sect of enthusiasts, that ever

infested this sect-creating and nonsense-loving kingdom.

The principal bait which the preachers of this class generally throw out, is that personal application and canting address to the audience, which feldom fails of its defired effect with weak minds. It is impossible to conceive how much may be done in a pulpit, with the help of a little theatrical action, by the words I and You. The fermons before us are full of these. In the ninth discourse our author cries out, 'Has Christ, my brethren, wrought in your hearts? How have you been affected with these discourses upon the loveliness and perfections of Jesus ' Christ? Have they made any good impression upon you? · Have you had stronger defires after Christ, and have you seen ' him more lovely, than you ever did before? These effects ' ought to have followed: for his "name is as ointment poured " forth," the preaching of his name is like opening a box of the richest perfume. It diffuses its fragrancy all around, so that the house is filled with the grateful odor of the ointment. Did you perceive none of it poured forth, none of this unc-' tion from the holy one descending upon you this day? Did ' you find no fweet favour of grace working in your hearts, ' while I was attempting to draw a short character of the love-· liness of Jesus? Did he appear to you altogether lovely, as ' man, as God, as God-man united in one Saviour, and was it ' the prayer of your foul, that you might find him your be-' loved and your friend? If the Holy Spirit accompanied the word, these effects have followed; if they have, give the ' glory to God, and be thankful; and if they have not, Oh that ' he may now enable me to fpeak a word to your consciences.'

When he comes to those words in the eighth chapter, Who is this that cometh up from the wilderness leaning upon her beloved? he expatiates largely on the word lean. 'Here (says he) we see the work of faith painted before our eyes in the most beautiful colours. There could not be a finer picture of the believer's reliance upon Christ for grace to support every step, and for Vol. VI. July 1758.

ftrength to carry him on in the christian life, than to draw the church leaning upon her beloved. To lean and rest the body upon any thing is the perfect representation of faith leaning and resting itself upon Christ. An able expositor upon the passage has these words — "She is leaning on her beloved; that is, as they, who are weak, make use of a staff in climbing of a strait and steep ground, or ease themselves by leaning upon one that is strong, and especially one whom they love for helping them in their way: so the believer is faid to come up from the wilderness, leaning on her beloved, because she being weak in herself and unsit for such a difficult journey, by faith rests on Christ, for helping her in the way, whereby she is sustained, and carried through in the duties of an holy walk, and the difficulties in her way, till she come through the wilderness unto the land of rest."

Every step she takes, spiritually by faith and love, she cleaves to and relies upon Christ. There is a sufficiency, and efficacy in Christ to save to the uttermost, to begin, and to carry on, and to perfect the whole work of salvation: he is the wisdom, righteousness, sanctification, and redemption of believers; and therefore they would not only by faith be united to him, and lean upon him for the pardon of their sins by his righteousness, but they would also by faith depend upon him for their sanctification, for their dying to sin, and being alive unto God.

A little further on we meet with this fagacious interpreter's explanation of 'Set me as a feal upon thine heart, as a feal upon thine arm. Christ (fays he) redeemed both our real and personal estate, but we are not in possession of either, until it be con-· veyed to us under the feal of the Holy Spirit. Christ's redemp-* tion without the Holy Spirit's application, is like a deed without a feal, which you know can legally convey nothing. It is the ' figning and fealing that makes it good in law. And when the Holy Spirit feals the believer, then he receives the earnest of ' his inheritance. And when you are fealed for his, and find his affections are placed upon you, then you will have the comfortable enjoyment of his present graces, and sure and certain hope of your inheriting the promises of eternal life: for then 6 he will also " fet you as a seal upon his arm." His arm is his power. The hand is the active part of the body, by which " the strength of it is exerted. We labour and work with our hands; and when the scripture speaks of the arm of the Lord, ' it means his active power, which the faithful foul here defires • may be exercised continually for its salvation. To be as a seal · upon his heart would be of no use, without the seal upon his arm. His love would not be a bleffing, unless it was an active · operative

operative love. But it is therefore defirable to partake of Christ's love, because it will awake the arm of the Lord, and

will bring falvation. His love and his power are never fepa-

rated; his heart and his arm act together, and therefore the
 faithful foul does not put them afunder, but prays in the text,

that the beloved Saviour would give her experience of both-

"Oh fet me as a feal upon thy heart, that whatever thy love disposes thee to do for finners, I may share and partake in

" it—Oh fet me also as a seal upon thine arm, let me also,

" bleffed Jesus, be engraven upon the palms of thy hands, that in all thy works thou mayest remember me with mercy. Let

" thy love engage thy power to make all thinks work together

" for my good."

By this short specimen of Mr. Romaine's twelve sermons, our readers will perceive the stile, manner, and scope of them, of how flimfy a texture they are, and of how little fervice they can possibly be to a rational audience. Nothing indeed can account for the extraordinary degree of applause, which these quacks in divinity fo frequently meet with, but the strange propenfity in mankind to superstition and enthusiasm, together with that wonderful credulity which arises from a long habit of vice. When the mind is fick with folly, and begins to feel the checks of conscience, it will not depend on the ordinary remedies, but flies to some grand specific for immediate relief. This is the only probable reason that can be assigned, why so many who have in other matters their share of sense and understanding, leave those churches where the gospel of Christ is preached foberly and fenfibly, to run after a fet of frantic visionaries, the Murden's, Jones's, Madan's, and Romaine's, of this fantaitic age.

ART VI. Remarks on the Rev. Dr. Powell's Sermon in Defence of Subscriptions, preached before the university of Cambridge on the Commencement Sunday, 1757. Wherein the latitude said to be allowed to subscribers to the Liturgy and Articles of the Church of England, is particularly considered. With a dedication to the younger students in both our universities, who are designed for the ministry of the church. &vo. Price 1s. 6d. Millar.

It hath of late, as we are informed, been the subject of much conversation in the university, and canvassed with great warmth by the doctor's friends and opponents, who have applauded or

censured it according to their different opinions. The major part (if we may credit a * letter which we received from thence on this subject) embrace the sentiments of the remarker, who as we shall see by his pamphlet is greatly alarmed at the ill confequences which may arise from an adoption of Dr. Powell's Plan of Subscription. The reason of his fears will best appear from his own representation of them, which, as the matter is of an interesting nature, (especially with regard to the clergy) we shall give a short abstract of, for the information of our readers, subjoining as much of the doctor's fermon as may be

The author of these Remarks, whom our readers will find to be a shrewd and sensible observer, has dedicated his little performance with great propriety to the younger students in both universities, who are educated with a view to their ministring in the church of England: wherein he observes, that the hardship of fubscribing to human systems and articles of faith is already fo evident, as to make men wish to be relieved from their anxieties about fuch tests of that kind as the law had imposed upon them. Amongst which he begs leave to reckon Dr. P. himself; because, if he and his fellows were not grievously galled with the yoke, what occasion to plead for a latitude which would defeat every rational purpose for which subscriptions can be supposed to be required?

Whether some of the forms or ceremonies of religion are or * are not useful, edifying, expedient, &c. may be questions of

- fmall moment, in comparison of the public repose, which
- ought not therefore to be disturbed by any importunate alter-* cations upon them. But whether a fet of men who are ap-
- ' pointed by public authority to be teachers of religion, may
- · put their own different and inconfistent senses on a precise form of words, prescribed by the same authority for a test of
- 4 their opinions? or whether these men may disguise or conceal
- their real meaning, and give a folemn affent by the fubscrip-
- tion of their names, to what in reality they do not believe?
- are questions which no found politician would determine in
- the affirmative. Because whatever such teachers may advance
- afterwards, by way of inforcing the duties of fincerity and
- · fingleness of heart upon the people committed to their care, will be of little consequence, when their own conduct comes
- * We are obliged to our unknown Cambridge correspondent T. B. for his letter, but cannot infert that as our own opinion which was written by another. If he thinks proper to publish his Remarks, they will not be neglected by the authors of the Crirical Review.

- * to be known. The people will certainly think themselves
- fufficiently justified by this leading example, to take the same
- liberty both in their private and public covenants, as far as
- they may with impunity. And then, farewel to that good faith between man and man, so necessary for the peace and
- welfare of every community, in ten thousand instances, which
- the strictest execution of the best human laws in the world
- will never be able to reach.'

He seems to think, therefore, that such of these young men as have the best capacities of understanding, and the deepest impressions of religion upon their minds, will upon a serious and impartial examination of this important case, find the greatest reluctance in themselves to comply with these terms of ministerial conformity. At the same time, such of them are, of all others, the best qualified to promote the true interests of religion, or in other words, to do the most substantial service to the community as teachers of religion.

He observes from the author of the Essay on Spirit, that "gen-"tlemen are generally ordained priests, when they are twenty-

- " four or twenty-five years of age. And is this an age for any
- " person of a profession to have his mind made up, and never
- " to attempt the improvement of it afterwards? Is theology a
- " science of so easy acquisition, as to be thoroughly mastered
- " at that time of life?"
- 'Certainly not. And therefore what wonder, if a man who
- ' fubscribes to the articles with the fullest and firmest affent 'when he takes orders, should after ten or twenty years, abate
- of his faith, upon finding a more probable account of fome
- " points of doctrine elsewhere."
- 'Whatever conception fcrupulous clergymen may have of
- their own fituation and circumstances, the case of many of them is sufficiently hard to demand great allowances from the
- candid and charitable hearts of other men. Many of them
- discover not the truth of the case, till it is too late to turn
- ' themselves to other employments; and without some employ-
- ' ment they must want bread for themselves, and perhaps a
- · large family *.
- 'You are yet (fays he) gentlemen, under none of these hard necessities. If upon examining into the nature of the case
- * See a pamphlet intitled, The Church of England tried by herfelf, printed for Noon, 1756. Wherein the fentiments, as well as the manner of conveying them, are so similar to the remarks before us, that we could almost venture to ascribe them both to the same hand.

- here proposed to your consideration, you should find your.
- · felves excluded from the paradise of ecclesiastical preferments,

· The world is all before you, where to chuse · Your place of rest; and Providence your guide.

- ' You are now timely apprized of your fituation. You have the opportunity of a free and convenient intercourse with each
- other. You may receive great light and affiftance, by fre-
- quent and friendly debates and conferences upon this impor-
- ' tant subject, among yourselves; and the sensible and conscientious part of you, great encouragement to hold fast your in-
- ' tegrity: which, after all, is the personal concern of every one
- of you, in view of the common obligation you have to the
- Lord of the vineyard into which you are called, whatever station

" may be affigned you in it."

Having thus feriously addressed himself to the young students in divinity, our remarker proceeds to his examination of the fermon, and the doctrines contained in it, which he calls a remarkable Defence of Subscriptions, conducted on such principles as manifestly tend to confound the common use of language, fubvert the foundations of good faith in civil commerce, and to reduce the word of God to an ignominious level with the futile and unftable fystems of weak and presumptuous men.

The remarker previously observes, that the title of the doctor's fermon breathes nothing but defiance; but upon a nearer view of the champion and his weapons, you find him all lenity and indulgence, and disposed to compromise matters by such extraordinary concessions on the part of the church, that one cannot help suspecting he must have exceeded the bounds of his

commission, supposing him to have had any.

He then comes to a particular view of the performance. That our readers may fee in the best manner how the argument stands between the combatants, as a specimen we shall place a few of the affertions of the fermon, and the remarks upon them, in opposite pages.

The doctor's text is,

Now I befeech you, brethren, by the name of the Lord Jesus, that ye all speak the same thing, and that there be no divisions among you.

Sermon.

"It is of more importance " to the peace and happiness of

- " a community that its mem-
- " bers should speak than think

" alike."

Remark.

- ' Perhaps it may, to the ' peace and happiness of a com-
- ' munity of hungry expectants
- 'at court: but would any one
- believe that the doctor is here ' speaking of a religious, and
- what is more, of a christian

f community?

Sermon.

Sermon.

"They who have learned to " confess their faith in the same " form, will confider each " other as friends, even though " they should disagree not a " little in their explanations of " it: while fuch as have been " accustomed to different ex-" pressions, can seldom be con-" vinced that their opinions " are the fame."

Sermon.

"Great liberty is left for a " difference of judgments in "matters either not plain " (points of fpeculation) or " not important; (ceremo-" nies;) So great indeed, that " one might reasonably hope "it would extend to every " man, whose principles are " not destructive of our church " and nation."

Sermon.

"The Diffenters have been " rendered obstinate in mat-44 ters perfectly infignificant."

Remark.

This is false. For multi-' tudes of them not only confider but actually treat each other ' as the bitterest enemies: and 'what is extremely unlucky for the doctor's hypothesis, no 'community upon earth in ' proportion to its extent, hath ' furnished more examples of this, than the very church he ' is defending.'

Remark.

It would be very hard to ' fay what particulars in our ' liturgy and articles might not be reduced to one of these * two heads, viz. points of speculation, or ceremonies; and harder still to fay, how far men might not differ about 4 thefe, without espousing prin-' ciples destructive of our church ' and nation. And if this indefinite liberty in differing ' may be taken, and is still con-' fiftent with a free and fincere ' confent to the fame liturgy ' and the fame articles of faith, ' it is amazing to me that there · should be one differenter in the ' whole kingdom.'

Remark.

'Where does the obstinacy ' and perverseness begin? At ' those who treat these obscure, ' unimportant, perfectly infig-' nificant matters, as if they were plain, and clear, and of ' the utmost importance; or at those, who, in reverence towhat they really think an higher ' authority, cannot be persua-" ded to have them fo treated?"

Sermon.

"Should a man adhere to " this principle [his freedom " from human impositions] he " could never join in any pub-"lic worship." How so? why, " not only the times and places " and ceremonies of it, but the " words also, must either be " appointed by common con-" fent, or chofen by him who " prefides in each congrega-"tion. And that conscience " must be strangely perverse " which can fubmit to the di-" rections of a fingle person, " and not to the authority of " the public."

Sermon.

"The declarer's affent is to be given to the use, not the truth of the liturgy."

Remark.

' Very true, supposing these directions and this authority to ' have respect to the same hu-' man impositions. But should that conscience, after the most ' deliberate inquiry, be con- vinced that what is appointed by common confent, or directed by a fingle person, is in ' perfect agreement with the ' word of God; and that what ' is prescribed by public autho-' rity is contrary to it; or if in ' the one case, nothing is im- posed on that conscience without its confent, while in the other, its confent is neither ' asked nor regarded; the doctor, I'm afraid, must acquit 'that conscience of all strange ' perverseness, or deprive the church of England of one of her fairest apologies for se-' parating from the church of "Rome."

Remark.

'The affent under confidera-'tion is thus expressed. "I N. " N. do willingly and ex animo " affent that the book of Common-" prayer, and ordering of bishops, " priests and deacons, containeth " in it nothing contrary to the " word of God; and that it may " lawfully so be used." i. e, As containing nothing contrary ' to the word of God. Does not ' every one fee, that the affent ' thus required to the use of the fliturgy, plainly implies an affent likewise to the truth of it? or, what is the fame thing in the language of Protestants, an affent to its agreement with the word of God?

Sermon

Sermon.

"No body ever asks con-" cerning a petition or a rule, " whether it be true; but whe-"ther it be decent, proper, " reasonable, useful."

Remark.

All that can be meant by ' this is, that he who should ' fay, "a petition or a rule, is or " is not true," would not speak with critical exactness. in every petition there is some allegation, concerning the truth of which, every one, I fuppose, to whom the petition is addressed, takes some care to be informed. And he who ' prefers a petition ought to be fatisfied that the matters of · fact, or the reasons suggested why his petition should be ' granted, are true; because on this circumstance the decency and propriety of his petition will chiefly depend. And fo · likewife, concerning a rule. a ' rule of religion at least, in-' tended to direct me to a rea-' fonable and ufeful manner of divine worship. And indeed of fuch a rule, I fee not why ' truth or falfehood may not ' be predicated with the utmost ' propriety of language.'

Sermon.

"With regard to the cha-" racter of the liturgy [its de-" cency, propriety, &c.] we "meet with demands on one " fide, fays he, and boafts on the " other, of fuch perfection, as " never was found, nor proba-" bly ever will be, in any hu-" man composition."

Remark.

" A distinction should be ' made between the perfection ' demanded, and the perfection boafted of. The Diffenters and others who require perfection ' in the liturgy, require only 'that it should be modelled as ' near as may be to the plan of ' public worship laid down in ' the word of God. They in-' fift, that the scriptures of the 'New Testament contain a ' plan fufficiently perfect for the ends of fuch worship, without the addition of any

inventions or impositions of men. They think that such inventions and impositions disparage and corrupt the worship of God. And whenever the liturgy shall be so reformed as to have no doctrines, injunctions, forms or rites, but such as are contained in the said scriptures, or may be proved thereby, they will be satisfied.

Sermon.

"The greatest part of man"kind always think that cere"mony right, to which they
have been accustomed. Nor
"are they much mistaken.
"For in matters of this sort
"nothing is plainly wrong but
"change."

Remark.

'That is to fay, in plain Eng-'lish, "all ceremonies, reli-" gious as well as others, which "have prescription on their " fide, are right; and they only " in the wrong who attempt to "change or abolish them." 'The ancient pagan ceremo-' nies were right, so are the 'mahometan; fo were the ' jewish ceremonies; and tho' the ceremonies which have ' fucceeded them have gained an indisputable title by long and ' quiet possession, yet the attempt ' to change them at first was certainly wrong. In purfuance of this doctrine, the Pa-' pists were right in their ceremonies before the the refor-' mation; and the Protestants a fet "of honest perhaps, but " mistaken men, who sent so " many of them a packing." 'This is done like a workman, and may with a good grace ' pretend to the folemn thanks of the next fession of the con-* gregation de propaganda fide." Remark.

Sermon.

" Our articles of religion are not merely articles of peace. They 'They are then both articles
'of peace, and a test of our
'opi-

"They are defigned also as a test of our opinions."

opinions. Peace when spoken of in reference to opinions, im-" plies agreement and consent in the same opinions. And then the definition of our articles will stand thus. "The thir-" ty-nine articles are a test by " which it is proved, that all " the fubscribers to them are " of the fame opinions with " respect to the several doc-" trines contained in the faid "articles." 'This likewise is perfectly agreeable to the account which the articles give of themselves, viz. Articles agreed upon by the archbishops, and bishops of both provinces, 'Sc. for the avoiding ef diver-' sities of opinion, and establishing consent touching true religion. 'Whence it appears that the ' fubscribers to these articles are understood by the church, " not only to believe them, every one for himself; but all to be-' lieve them in one uniform fenfe. 'The fame is likewise im-' plied in Dr. Powell's descrip-'tion of them. If two or more men subscribe an arti-' cle each in a different fense, ' that article immediately ceases ' to be an article of peace; and diversities of opinion are not ' thus avoided, but rather pro-' moted; or at least made more ' public than they would other-' wife have been. For it is very possible that many of ' these subscribers would have ' had no other opportunity or temptation to have fignified ' fome of their opinions, but this of subscribing. On the other hand, if one or more men fubscribe these articles,

as articles of peace, without any respect to their opinions, or as some have explained this, as engaging not to contradict them, they cease to be a test of opinions. Consent touching true religion, is not established by such subscription.

Sermon.

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"He who affents to our articles, must have examined
them, and be convinced of
their truth."

Sermon.

"Every fincere man, when he makes a public and solemn declaration of his own faith, will consider that declaration as meaning, not what it really does mean, not what he himself may apprehend it to mean, not what they who require fuch declaration have determined it to mean; but what it is usually conceived to mean by others, who do not think themselves concerned to discover what the true meaning of it may be."

Sermon.

"Wherever an article is ex"pressed in such general terms
"as will fairly contain several
"opinions; there certainly it
"is sufficient for him who sub"scribes, to be convinced that
"some one of those opinions
"is true."

Remark.

'If examination and conviction
'be necessary to that assent
'which is given to the articles,
'how can they be said to assent
'to them, or to be convinced
'of their truth, who have had
'no opportunity or no capa'city to examine into it?'

Remark.

'What company does the defender keep? His thinking men are guided by falhion; his fincere men make public and folemn declarations of their own faith in other men's meanings; and, as we shall fee presently, his bonest men may agree without scruple, in the same confession of their faith, although they make this confession, in inconsistent senses.

Remark.

'A fubscriber may put a par'ticular sense of his own upon
'some general words of an ar'ticle, and this may be suffi'cient for the present ease of the
'subscriber himself. But this,
'not being the real meaning
'of the article, is not sufficient
'for the church, which has no
'where declared, that this sub'scription is required barely
'for the satisfaction of the sub'foriber.

The

The remarker concludes his pamphlet with observing, that it plainly appears to him, the intended latitude of expression in our articles, which is here talked of, is nothing more than the pleasing dream of an honest man, and perhaps a scrupulous fubscriber, bred out of his earnest desire to have it so; but now shewn from the very circumstances of the case and the contents of the articles themselves, impossible to be true; or even if true, impossible to be applied to the fort of scruples which occasion the perplexity of conscientious subscribers in these days.

'Young people (fays our author) are apt to do some rash and ' foolish things of their own motion, and to be led into others, by the wicked artifices of knaves and feducers. The wisdom of public authority has thought it necessary, in many of these cases, to preserve inadvertent youth from the fatal effects of ' its own folly and indifcretion, by making a legal distinction between the acts of a boy of fixteen, and those of a man of fixty, even where the acts are the very fame. This distinction is made by voiding the act of the young man, and leaving

that of the old one in its full obligation.

. Common sense sees the reason of this, and approves it. But ' had not the diffinction been actually made by public authority, all the common fense of all mankind could not have made it appear, that what was only fit and reasonable to be done,

was actually done.

'Thus, in the case of subscriptions; men of sense, consider-' ing the doctrines to be subscribed as confisting of many various and intricate points of theology, may perhaps think it equally • fit and reasonable, that no greater obligation should be laid upon · minors in the one case, than in the other. But here public authority acts a different part. It is not barely filent and per-" miffive, but expressly prescribes the act of subscribing to young · and old, novices and adepts, in the same terms; and considers and requires it as a fecurity for a particular purpose, of equal

obligation upon all alike who give it.

'The common fense of mankind indeed, may possibly introduce one distinction between the obligation in question, and that is a distinction made by that authority which is superior to the highest upon earth. That authority will doubtless diffin-' guish properly, between the subscription of a child, who is in-' capable of acting otherwise in such a case, than by direction or " compulsion, and the subscription of a man, who is capable of " making an accurate judgment upon the nature, conditions and force of his own deliberate act. Whether fuch distinctions, so introduced, will, in the end, be very honourable to the cause he is confidering, is humbly recommended to the ferious confideration of the defender himfelf.

We have here extracted a few of the most material arguments and conclusions on each side, and shall leave our readers to their own determination concerning the merits of the question. The doctor may probably, when at leisure, give us his reply, as the attack on his character is strong and severe; and as he has entered the lists, it may be termed cowardice to turn his back upon his enemy, and decline the contest.

ART. VII. The Nature and Qualities of Bristol Water: illustrated by experiments and observations, with practical reflections on Bath-Waters, occasionally interspersed. By A. Sutherland, M. D. of Bath. Owen.

If this practice of writing upon bydrochemia increases, we, the Reviewers, will certainly be seized with the bydrophobia; from which good Lord deliver us. We have, of late, been bewildered in such a maze of experiments and contradictory opinions upon mineral waters, in the works of modern chymists and practitioners, that, in all probability, we shall be obliged to undergo a course at some medicinal well, the steams of which may purge our understanding of those doubts and films which they have generated.

We have read this treatise of Dr. Alexander Sutherland, who professes himself a Lucasinian, or disciple of Lucas, the great Hydra or water-dragon of the times; and find it orthodox enough with respect to the theory it adopts, and the practice it enforces: but, after all, we find nothing in it that should have induced him to take the trouble of sending it into the world; for there is not any thing new either in his method of ana-

lyfing the water, or in his observations on its effects.

After a short introduction, he begins with the history of Bristol water, in which he takes occasion to tell us, that the Downes near the well afford pasture (he might have added) and pastime for cows, horses, sheep, and asses; that there are balls twice a week, and card-playing every night. Then he proceeds to enumerate the writers on Bristol waters; but omits mentioning two of the principal, namely, Owen and Rutty. All the others, except Dr. Lucas, he treats as men who mistook the subject; and is particularly severe on Dr. Randolph, whose performance, he says, is full of errors and absurdities. The third chapter contains his analysis of the Bristol water, from which he concludes, that it is composed of a spirit, the pure element, a vitriolic acid, a marine acid, a neutral salt, an absorbent earth: but, in what proportions these ingredients are

mixed he leaves us to guess. In this chapter also, we find some objections to the real existence of sulphur in the Bath waters, which we do not rightly comprehend. Speaking of those who contend for the existence of this mineral, 'Supposing (says he) they were actually affured that the pyrite or bed of marcafite which heats the Bath waters was really composed of iron and ' fulphur, are they hence to infer that the Bath waters contain real native sulphur. The supposition is absurd; for to heat ' and impregnate any water, we must suppose that the bed of pyrite is actually fet on fire by the admission of external air. 'This mixture then of iron and fulphur, being once fet on fire, is not easily extinguished, till the sulphur is decomposed, till its phlogiston is confumed by fire, and its acid united to the iron. With what then will this mass be able to impregnate water? With a folution of iron, martial vitriol, and with nothing elfe. · For once, to indulge those who are so fond of sulphur, we ' allow them, that the Bath waters may be heated, as well as ' impregnated from a neighbouring bed of pyrite, whose comoposition may be iron and fulphur; so far, they are sulphureous; but that fulphureous waters should exist without that phlogiston, which is inseparable from sulphur, is absurd. Nor is there one grain of fulphur native or factitious in all the Bath waters. Experiments, eafy and obvious, a very little reading and attention, might remove their prejudice, but opinions when ' they are fanctified by time (as Mr. Locke well observes) become obstinate.

The doctor is here furely mistaken in saying the pyrite is set on fire by the admission of external air. We will venture to say, that he may blow at a pyrite a thousand years, through a pair of fmith's bellows, without ever fetting it on fire; and that without moisture, it will never heat, far less burn. We must suppose then, that the water to be impregnated runs over a bed of pyrites already heated by the same stream; and surely, in this case, there is no absurdity in believing that the water will be fulphureous. Or supposing the stream does not touch the pyrites, but runs within a small distance of the place where the faid pyrites burns, will not the fulphureous fumes impregnate the water? will it not become a real aqua fulphurata, according to the following prescription of the college?

Sulphuris portio aliqua in cochleari ferreo suspendatur super aquam in vasi clauso; et sumo residente, idem toties repetatur, donec totum fulphur fit consumptum.

To what purpose therefore talk of the phlogiston's being confumed? It cannot be confumed while the pyrites is burning. But, exclusive of this method of impregnating water with fulphur, there are a dozen different ways of dissolving that mineral so as that it shall incorporate with water. Nay, every good gentlewoman that keeps a favourite lap-dog will tell you, that a lump of common brimstone thrown carelessly into a bason of water, will communicate its slavour and its virtues to that water, which water will actually cure *Pompey* of the mange. Surely Dr. Sutherland cannot be a stranger to the efficacy of this medicine.

In chap. iv. he treats of the cause of heat in mineral waters, and asserts, that it is owing to pyrites alone. He rejects the notion of its being produced from a mixture of acids and alkalies. Nevertheless, Dr. Keir made an artificial Bristol water by pouring spirit of vitriol, or any other acid on powdered limestone. This produced a fermentation, a little heat, and a dissolution of part of the limestone: thence he concluded, that the native limestone only, void of the heat and acrimony of the artificial, enters into the Bristol water; and that those are mistaken who suppose the water is the product of a calcination by subterraneous fire.

The doctor afterwards examines the contents of the Bristol water, with their virtues, in the different articles of the spirit, the pure element, the vitriolic acid, the marine acid, and the absorbent earth; and this chapter is interspersed with observations physiological and practical. He then proceeds to discuss the virtues of Bristol water, in the cure of diseases in general.

- These waters (says he) seldom fail of success where the disease
- s is curable, where the physician knows to apply them pro-
- perly, and where the patient does justice to himself. What
 medicine does the materia medica afford, more safe than salts?
- What fo mild, as a fubtile, pleasant, spirituous fluid? When
- they purge, they occasion no loss of strength, no sickness.
- When they pass by urine, they bring on no strangury or
- fharpness, but pass off with a degree of pleasure. When they promote sweating, they occasion no faintness. Persons
- of all ages, as well as fexes, have fafely and fuccefsfully drank
- these waters.—From this general idea it cannot be hard to
- conceive after what manner Briftol water acts in the cure of

diftempers.

- · By its tepid fubtile fluid it resolves, rarefies, quickens, and · enlivens the drooping circulation, it removes all crispations
- of the folids, and reftrains the rapidity of the blood, corrects
- acrimony, cleanfes the ftomach and intestines, and corrects
 foul and viscid juices; thus it restores appetite and digestion.
- And, when it gets into the circulation, it diffuses itself thro' the
- whole habit, and reaches to the most minute capillary vessels."

In the last chapter, he explains the virtues of the Bristol water in particular diseases. After having laid down proper precautions, he recommends them in disorders of the lungs, hamor-rhages, the diabetes, stone and gravel, gleets, stuor albus, scurvy, rheumatism and gout, colics, and sluxes.

ART. VIII. The Art of Land measuring explained. In Five Parts. Viz. I. Taking dimensions. II. Finding contents. III. Laying out ground. IV. Dividing. And V. Planning. With an Appendix concerning instruments. By John Gray, teacher of mathematics in Greenock, and land-measurer. 8vo. Pr. 5s. Wilson and Durham.

SURVEYING, like the rest of the mathematical arts, has been treated of by a great variety of authors; though a complete treatise, or one containing all the rules necessary in the practice, seems still to be wanting. Mr. Gray has indeed, in the work before us, collected many, and added several, not mentioned by former writers; but omitted others of equal importance, which a careful perusal of the treatises on surveying already published, would have furnished him with.

In the introduction to this treatife, Mr. Gray has made the following general observations on the five heads into which his work is divided, 'all drawn (as our author tells us) from experience, and confirmed by a great variety of practice for

· the space of many years.

'I. Taking dimensions, &c. Here it will not be improper to consider a little the instruments used for this purpose. They

- are the chain, rod, wheel, &c. for lines: the quadrant, semicircle, theodolite, circumferentor, cross-staff, peractor, impe-
- rial table, &c. &c. &c. for angles: all of them, except the cross-staff, with a radius under 6 inches: nay some of them,
- by way of improvement, under 3 inches. The chain is, I
- believe, univerfally allowed to be the best for measuring lines;
 but what if it should be found the best too, of all the above-
- ' named, for measuring angles, when it can be used for that
- purpose, and that is, where-ever the ground is open and nearly
- ' level? This is what none of our authors have explained with
- respect to all kinds of angles; they have only shewn how to measure an angle upon the surface of the ground by it, and
- ' that too imperfectly: but how to take an angle of elevation
- by it, they have not fo much as hinted, as far as I have feen
- or heard: yet this is often necessary, when quadrants, &c. are not at hand, and can be done more exactly by it, than by any
- one of all the above instruments, and the rest of the same or Vol. VI. July 1758.

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' a less radius, that are not mentioned. Let this affertion be · put to the trial. See Prob. X. * of the first part following. · Suppose the distance from pin to pole equal to the difference of their heights, and confequently the angle of eleva-' tion 45° 00'; which supposition bears hardest, upon this * rule, of any that can be made; for the more the angle is in-' creased above, or diminished below 45° 00', the less is the effect of an error in that distance or difference of the heights. If, instead of 10 links (for example) the distance is 9,98, • which is an error of $\frac{1}{50}$ of a link, this will make the angle 45° 03'; and I can fee nothing to hinder the measuring of 10 · links to 1 of a link of the truth, or to 6 of an inch. Now ' how exactly can the common quadrant, theodolite, &c. with ' a radius of 6 inches, take any angle? Let us fee. The arch of the quadrant is 9,4 inches, a degree about 10 of an inch • and 6 minutes $\frac{1}{100}$. This $\frac{1}{100}$ of an inch is to be cut off by ' the exact half of a thread, hung from a centre, perhaps not ' that of the quadrant; for it is very possible to mistake there, with a plumet, and hand shaking a little——I only ask, whether 6 minutes can be as furely taken this way, as 3 mi-" nutes may be the other way? and if this is the most favourable supposition for the quadrant——As the distance of · the pin from the pole increases, the angle of elevation de-· creases, and an error in the distance may more easily escape. Let us then make another supposition, of a distance of 25

* The prob. referred to is this, 'To find an elevation by the chain.

RULE.

· At the foot of the height fet a pole truly perpendicular; go · back from it in an horizontal line, till you just see the top of a pin sticking in the ground, the top of the pole, and the top of the height all three in one line: measure the height of the pole and pin above the ground, and distance, most exact-' ly: then, as the exact distance of the pole and pin, to the difference of their heights, so is the radius, to the tangent of elevation.' Our author should here have added a figure to explain his meaning; for it is not very easy to understand how the observation is to be made by the help of this pin sticking in the ground. The truth is, no pin at all is necessary; for when the observer sees the top of the pole, and the top of the height in the same line, he has nothing to do but measure the height of his eye above the bottom of the pole, and the horizontal distance between them; the former of which may be eafily done by a ftaff of a proper height, and the latter by the chain, as before directed.

links, and difference as before 10 links; the angle will be found now 21°48'; and supposing the true distance 24,9, or an error of 10 of a link, about 30 of an inch in a length of 16½ feet; the true angle will be 21°53', still more exact than the quadrant, which can hardly be depended on within 10 minutes, as may be concluded from what has been just now observed, and is really confirmed by experience.

As for the theodolite, and the other instruments abovementioned, whose principal use is to measure an angle upon the ground, and which, particularly the theodolite, are so highly extolled; if the chain, with its necessary attendants, polls and pins, can take any angle upon the ground, where it can be applied as exactly as an angle of elevation, it must certainly be preferred to them also: let us see then if it can. See Prob. XVII. of Part I.

'The chord may be measured exactly, at least to 100 of a link: the greatest error that can happen is when the chord is near 100 links, for the shorter it is the less is the effect of an error upon the angle: in this case it comes within 4 minutes of the truth, and in every other case nearer; whereas by the theodolite, &c. as appears above, the nearest you can come is to 10 minutes †.

* The rule given by Mr. Gray for measuring an angle upon the ground is as follows: 'Measure from the angular points' one chain upon each of the sides, setting poles or pins at the end of these measures: if these poles or pins are above a chain distant, set one or two more as far from the angular point as the two sirst, and so as none of them all may be more distant than one chain: one set between the two sirst makes two angles, and two of them make three; find these angles by the following proportion, and add them together, their sum is the angle required. The proportion is, as 100 to radius, so is half the distance of the pins to the sine of half the angle.'

† This conclusion of our author is very unjust: for he supposes that the theodolite has only primary divisions, whereas few are made in that manner at present, most having secondary divisions either by diagonal lines, or a nonius; by either of which an angle may be taken to within three minutes of the truth, and by the latter to a single minute; especially if the radius be nine inches; and sew persons who are curious have their instruments of a less size. All therefore that our author has added, with regard to the errors resulting from measuring land with this instrument, when properly made, is destitute of foundation.

' If a chain then, which must be had at any rate, can do the

· business of all these instruments, on open level ground, tho onot so quickly, with far greater exactness, I would fain know

what is the use of them there? and if such an instrument, as

the graphometer, as quick as any of these, that can be used on every ground, more convenient and more exact than the

chain, can be easily got, may it not be preferred to any pretty

gewgaw of no real use at all?

But as it is the opinion of feveral authors and practitioners, • that an angle taken within 10 minutes of the truth is exact enough, and accordingly you will find tables of logarithms calculated to every 5th minute only, published along with · books of furveying; let us try what grounds there are for that opinion, and what the followers of it mean by exact

enough.

Suppose then an inclosure of the figure of a rhomboides, its base is 1000 links, its angle 16° 20', and side 1042, the area will be found 293050; but if the angle should be 160 10', that would make the area 289900. Here the difference is • 5 poles, in a content less than 3 acres, equal nearly to 1 rood 10 · poles in about 29 acres: and this error affects the area without altering the fide one link.

Suppose again, a triangle whose base is 1000 links, and ane gle opposite to the altitude 74° 15', the area will be found 17 acres, 2 roods, 36,6 poles: but should the angle be 74 25', then the area would be 17 acres, 3 roods, 28,48 poles,

• the difference near 32 poles in less than 18 acres. ' In both these examples, the error may be 1 acre in 88 or o; the very least error in any case will be found 1 in 173. · Is this exact enough?—I don't fay that any graduated inftrument can be fo very exact in every angle, as to TOOO of any altitude, supposing the angle taken within a minute of the truth; but furely, within I minute is better than only within 10; and an error of 1 in 900 is more excusable than 1 in 90: or upon the most favourable supposition, within 1 of

1720, is more exact than within 1 of 172.

But to show that no advantage is taken by chusing angles. · let us make one supposition more; of an angle opposite to • the altitude of a rhomboides, taken for 87° 50', instead of · 88° oo; let the segment of the base next the angle be 20 · links, and the whole base 1000, the altitude will now be found 528,625, instead of 572,725, and the difference of the areas · above 1 rood and 30 poles in less than 6 acres.

' In this case of finding the altitude by the angle and segment of the base, or whole base, by which these three examples are wrought, you may observe, that the nearer the · angle angle approaches to 90°, or the smaller it is, the greater is the effect of an error: in the last example, the difference of 1 minute would make 43 in the altitude, and 71 poles in the area. There is only one other possible case, by which the altitude can be found, viz. by the angle and two including sides, or hypothenuse and base; and here an error of 1 minute under 15° has the same effect as in the other case; and it is the same thing above 165°; so that here are 30 degrees, or one sixth part of the number of all possible angles, which, if you please, you may call forbidden angles in both possible cases; and as many more, viz. within 15° of 90°, forbidden in one of the two cases by which the altitude, and consequently the area, can be found; for an error of a single minute has a considerable effect.

When these angles, therefore, occur in practice, as they must very frequently, the right lines subtending them must be measured, as well as they, and used instead of them: and where this cannot be done, that ground may be declared, not exactly measurable, by any method ye discovered. I don't mean perfect exactness; that is a thing not attainable: but

that the error may not exceed 1 in 900.

' If it should be objected, that this is too much of exactness * to infift upon, because there are so many finall errors almost unavoidable in measuring the lines, that no content can be expected within 1 acre of 900. I answer, so much the worse for the theodolite, &c. unless you can suppose their errors to balance some of the others; for if the sum of all these unavoidable errors, supposing the worst, should amount to 1 in 800 acres, fure, 1 more in 900 is enough in all conscience. But the exactness of measuring the lines may be tried too. • The chain may be made exact to i of an inch at least; sup-• pose then an error of 1 sooo in the make of the chain: any · line whatever may be measured or found to I link in 10 chains, this will make the unavoidable error not above 1000 ' in the measuring: the sum of these errors then is 3000, or ' 1 in 888, at most. Nay, it may be very justly reckoned " within 1 of 1000.

In the foregoing examples I have chosen the rhomboides and triangle, only for the easier proof: but the effect of the errors will be found the same upon the altitudes and areas of all other figures; and the greater the number of sides, the worse.

'From the whole then, I think I may fairly enough infer, that a good graduated inftrument may be trusted for all, except the forbidden angles; but the common theodolite, &c. &c. &c. for no angle whatsoever; and that it is much better

F 3

' trusting

trusting the measures of lines than of angles, in all the cases that may occur in practice, because the exactness is greater,

and always the fame.

I shall conclude upon this head with observing, that every thing required to be done in the field, can be performed by • the chain only, and without it nothing. And the less you f make the radius of a graduated instrument, the more useless it is. 'II. Planning, &c. This must be performed with a scale and compasses: and when there are no angles to be laid down, • there is no need of any other instrument: but when angles are taken, some graduated instrument must be used in forming the plan. The protractor is that commonly recommended and used. Let us consider it. Its radius is, at most, one half of that of the theodolite: you may almost distinguish 1 of a degree from 2. Let us see now, how truly a * triangle, right-angled for example, may be planned by it. Suppose the base 2000 links, and the opposite angle 18° 5 30, the other leg will be found 5977. But if the angle flouid be 18° 10', the leg would be 5864. Here, for any thing you know, may be an error in every 53 links of the fide determined by protraction. If every triangle is wrong laid down, and if there are 40 triangles in the plan; what will be the consequence? And yet a protractor has cost some pounds, a theodolite a great many more: it is a pity fuch dear companions ever should be separated; let them therefore live and die together!

'What! no more theodolite? no more protractor? No. I have proposed a successor to the first: and, if you'll try, in place of the other, a sector with lines of chords to a radius of 8 or 9 inches, it will do better; and if the radius be one foot,

' it will be fo much better still.

'III. Calculation, &c. Here, I cannot help thinking it most furprizing, that two things, not having the least degree of connection, planning a piece of ground, and finding its content, should be made inseparable! yet this is done by all the authors upon the subject that I have seen or heard of. They all direct to protract the sigure of the ground which you have measured; then to measure the bases and altitudes, &c. upon this sigure, except such as were measured in the field; then to find the contents by these measures: nay, it is affirmed expressly by several of them, that the content of no sigure, except the rectangle, can be found without protraction t.

† Mr. Gray seems to have mistaken the sense of what the writers on surveying have afferted, unless he means writers we have

Strange! is there no other way to come near the truth, but by wading through falshoods, and heaping errors upon errors? 'To the small errors, almost unavoidable in taking the dimen-· fions by the chain, must we add, not only the errors, also unavoidable, in our scales and using of the compasses; for on instrument is perfect, nor can be perfectly well used, but · also the certain and great errors of the theodolite and protractor? The dimensions necessary for planning are sufficient · also for finding the content. The only things to be expected from the most exact plan, are a figure of the ground pretty e near the truth, and when laid down from a large scale, a guess at the content, made with a great deal of needless trou-· ble: a plain table draught indeed should be excepted, from a · scale of 200 links in an inch, but this is never called protraction, and is really a very different thing. We may come e very near the truth by methods almost as easy. But what ' shall we say when we are not allowed? When surveying by the theodolite, whether there be a necessity of taking angles, or not, and planning that furvey by the protractor, is infifted

have never feen. That some have said that the content cannot be found without protraction, is true; but we believe none ever understood it in any other sense than, that the content could not be found without first investigating the bases and perpendi-For no writer can be supposed so ignorant, as not to know that these requisites might be found by calculation, if any person would think it worth the while to take the necessary pains. None will deny, but that the contents of every piece of land may be found more accurately by calculation than by protraction: but if a proper care be used in the projection, and the instruments accurately made, these errors will be of very little consequence, notwithstanding what Mr. Gray hath said to the contrary; for experience has abundantly convinced us, that an angle may be projected to a much greater degree of accuracy than what this gentleman has supposed. Indeed, according to his supposition, that those instruments are only graduated into primary divisions, considerable errors will be the consequence; but this is not the case, most have secondary divisions, and some protractors have been lately made, by which an angle may be laid down to a fingle minute. Befides, it should be remembered that in long calculations, especially in extracting the roots of large numbers, errors are almost unavoidable, and may prove of much greater confequence than those committed by protraction; and therefore, whoever follows Mr. Gray's Method, would do well to prove every operation, either by projection or some arithmetical calculus.

upon, as the only way to find the true content? Ha!-

· Let us proceed to the next head.

- 'IV. Laying out, &c. This being very often required, and eafily performed, one might reasonably expect a clear and
- full explanation of all the rules for the purpose, from most of our authors: yet none, that I know of, have given more
- than two or three rules, by the by, for doing it: and these al-
- ' ways suppose, that the base, upon which you are to lay out,
- is a right line without off-fets, or irregular turnings and wind ings, upon any fide of it: which is rarely the case; for in laying
- out new grounds, or in cutting off a piece from ground already
- brought in, we are commonly confined to a boundary on one
- fide, and fometimes more; which boundary is very often a
- crooked winding line, and must be our base, in some part of
- the work. Now if all the fmall turnings are overlooked, the
- content cannot be laid out truly, neither can it be known
- how far it is wrong, and confequently the error is irreme diable *.

' V. Dividing, &c. Here again our authors all agree in the

- fame neglect of rules sufficient for the variety of the cases, and in the same erroneous supposition as to the bases and
- boundaries: but they do more: they direct you first to plan
- the ground (by the protractor) then to reduce this exact
- figure into a triangle, by drawing lines and arches; without
- telling how that is to be done upon the ground, or how you are to proceed, when it cannot be done there at all: then to
- ' divide, &c. A method curious, artificial, wonderful, and in
- one (sesquipedalian) word, geometrically-ungeometrical!

'To these observations upon each of the particular heads, I

· shall add one more regarding them all.

- 'Unless the irregular turnings and small windings, containing the off-sets, that almost every where appear upon the bounda-
- · ries of open fields, and very often in inclosures, are exactly
- " measured; you can neither find the true content, lay out,
- divide, nor plan truly. This should appear very evident: yet
- where is the book hitherto published, that gives any rule at

f all for this purpose?"

In Prob. XII. Part I. our author has given a method for finding the base of a hill, or to reduce hypothenusal lines to horizontal. The rule he gives is this:

* Our author has in this part given feveral good rules, and delivered the practice of this difficult part of surveying in a much better method than any we have yet seen; and therefore cannot fail of being acceptable to the practical surveyor.

Take

- Take the angle of elevation, and measure up to the top,
- then fay, as the radius to the up-hill line, so is the co-fine of the angle of elevation, to the bottom line that reaches to the
- foot of the perpendicular height. Take the angle of depref-
- fion and measure the down-hill line; then fay, as radius to
- ' the down-hill line, so is the fine of the anglé of depression to
- the rest of the bottom line. If the whole bottom line be re-
- quired at once, fay, as the fine of the angle of elevation to
- the down-hill line, fo is the fum of the angles of depression
- on both fides to the whole horizontal line.'

This rule is undoubtedly true, provided the up-hill and downhill lines, as our author calls them, are the true hypothenufal lines of the triangles. But we would ask Mr. Gray, whether the furfaces of hills measured with a chain, are in general of the fame length with the vifual ray between the inftrument and fummit of the hill? Every one must have observed, that the acclivities and declivities of hills are generally very irregular, and confequently a line measured on such surfaces, very different from the vifual ray above-mentioned. And accordingly most furveyors have given a practical method of finding the base line of a hill by the chain only, which we wonder Mr. Gray has omitted, as the chain feems to be his favourite instrument. We do not mean that of our author, Prob. XIII. but a very different one mentioned by Mr. Leybourn, in his Complete Surveyor, and other authors, particularly in a small treatise, intitled, The Country Survey-Book, by Adam Martindale, page 102.

We shall conclude this article with observing, that Mr. Gray's treatise is, upon the whole, a useful piece, though it might have been much more so, had the author added figures to explain his rules, many of which will not be easily understood by those who are not before acquainted with the subject.

FOREIGN ARTICLES,

PARIS.

ART. IX. Les choses comme ont doit les voir.

The World as it ought to be seen. By Mons. Bastide,

CHAP. VIII. Of pretended philosophers. Like strolling players, fays our author, they strut forth in borrowed cloaths aukwardly put on, and exhibit without either wit or nature; and too often are bad men at the bottom. Self-love is their first passion; they would usurp our respect, and chase from society those who do not acknowledge their title and merit.

Chap,

Chap. IX. Of the inequality of conditions, begins with observing, that evil is every where; but then good is as universal: an incontestible maxim. The inequality of condition is never however more strongly selt than when one considers one's self as not having brought into the world a greater share of gloom and envy than another; yet one cannot forbear feeling an inward humiliation to see a nobleman with worse manners than his groom, enter an apartment animated by rank, lace, and diamonds, break the most rational lively entertainment, attract the greatest deference, and without speaking eclipse the most brilliant wit.

Chap. X. Of Paris, on which vast encomiums are lavished, is concluded thus: Paris, the masterpiece of art, the school of taste, the temple of wit, the example for other cities, and ornament of the world. Surprising temple of happy arts! that you may be always respected by the barbarous hand of time! you were the cradle of flourishing geniuses, the universe owes to you what it is. Happy the mortal who is one of your inhabitants; and who, sensible of your beauties and inestimate treasures, can contribute to embellish, and at the same time have the pleasure of enjoying them; but unhappy is he, who knows all the advantages of which you are mistress, only always to regret them.

Chap. XI. Of the province. This is only a picture of the

country, opposed to that of Paris.

Chap. XII. Of prudes and devotees, or religious hypocrites.

Chap. XIV. Of misanthropy.

Chap. XV. Of the fashion of thinking. This is one of the most useful chapters of the book, and contains some curious observations which we have not room to quote.

Chap. XVI. Of those ages which are called gold and iron by the

poets.

Chap. XVII. Of the behaviour which a woman ought to shew to a man who makes love to her.

Chap. XVIII. and XIX. Of the regard due to one's felf. 'This is an ingenious essay on self-love, and of the means of procuring the esteem of others.

Chap. XX. Of the defects of genius.

We shall sum up our character of this book with observing, that Mons. Bastide's essays are very ingenious, but very whimfical; that his language is neither the best, nor yet the worst, we have ever seen; and that he has wit, pleasantry, and instruction.

AMSTERDAM.

ART. X. Discours et autres ouvrages de Mon. D'Aguesseau, chancelier de France, &c.

Discourses and other works of Mons. D'Aguesseau, chancellor of France. 2 vol. 12mo.

HOSE persons who undertake to publish posthumous works of celebrated men, often do them an irreparable injury, either through want of tafte or a defire of gain: men ambitious of literary fame feldom let any thing lie by them, that they think worthy their characters. But if it should chance that these concealments arise from that modesty which is inseparable from true merit, then the publication is an honour to their memory, as in the present case. Mons. D'Aguesseau long filled with reputation feveral confiderable departments both in the law and the government; and these pieces are a fresh proof of his great talents. We are forry to think there are others of his works still detained from us, because the editors of the collection observe in their advertisement, that they hope this publication of fuch pieces of the chancellor's as they could recover, will induce fuch persons, as possess any more of his discourses or other effays, to communicate them to the public. This advertisement is followed by an abridgement of D'Aguesseau's life, already inferted in a supplement to a French historical dictionary; a discourse pronounced by M. Terasson, advocate of the parliament, in prefenting the chancellor's letters to the court of affiftants; and an extract from Armaud Maichin's history of Xaintonge, wherein mention is made of the origin of the house of D'Aguesseau.

In the dictionary it is observed, that Henry Francis D'Aguesfeau, chancellor of France, commander of the king's noble orders, was born in November 1668; and that at forty-eight years of age, he was raised to the first dignity in the kingdom of France, without having either fought or defired it, by the regent, than whom no man was a better judge of merit. He was a good scholar, an excellent magistrate; his genius was great, his heart good, his apprehension quick, his memory surprising, and his knowledge of the law prodigious. He understood radically not only his mother-tongue, but also English, Italian, Spanish, Portuguese, Latin, Greek, and the oriental languages. dying languages he called an amusement; and reading the antient poets, the only passion of his youth. He himself made yerses, the goodness of which was allowed by Racine and Boileau, who were almost the only companions of his leisure. His talents he exercised in offices of virtue, never to shew his superiority over his fellow-creatures; and he himself appeared to be the last man who was acquainted with the advantages he

conferred on fociety.

After the extract from the history of Xaintonge, we find three discourses of the chancellor's: the first on the union of philofophy and eloquence, necessary to form the orator. The fecond, on the decline of the oratory of the bar. The third, on the grandeur of the foul, with which the first volume concludes. The second volume confists of eleven discourses, fix of which relate to proceedings in the law. The rest are, 1st, An eulogium on Mr. de la Briffe, who had been solicitor-general. The 2d, On the love of one's condition. The 3d, On the use and necessity of science. The 4th, A discourse on M. Nain, who had been attorney-general. And the last of all is an essay on the study and exercise necessary to him who aims at being a king's counsel. This piece has been particularly admired, and is composed with such energy, knowledge, and taste, that the French, with their usual partiality, pretend, for this only, to fet him on a footing with Bacon: indeed there is an if in the case. If, say they, his numerous and important occupations had left him at leifure to apply more closely to philosophy and the Belles-Lettres, he might, in every species of learning, have equalled the English chancellor, aubom be fometimes furpassed: this gasconading is truly French. We shall return the compliment by only faying, that, though we think the French chancellor every where inferior to the English one, we allow that his imagination was fertile, his images great, his ideas clear, his argumentation strong, and his language elegant; that his learning, morality, and tafte, may be useful to every one, and more particularly to the gentlemen of the long robe in France, whose occupation ad imum, no man better understood than this illustrious lawyer.

Monthly CATALOGUE.

Art. 11. The Beauties of Spring. A Sermon preached at the parishchurch of St. Saviour, Southwark, in May 1756. By T. Jones, M. A. Chaplain of the faid parish. 8vo. Pr. 6d. Dilly.

HE Beauties of Spring may possibly be thought an odd title for a fermon; but the more odd and uncommon the more agreeable must it be to the enlighten'd followers of Hutchinson and Romaine. The only bufiness is (as Mr. Bays says), to elevate and furprise. And this is not to be done by mere sense and argument, but by fomething new, and out of the way. Mr. Tones

Jones therefore, knowing whom he has to deal with, leaves the plain and beaten road of the New Testament, and flies to the Canticles, where he has room to expatiate, and give a loofe to his imagination, by turning interpreter. " My beloved spake, and said unto me, rife up, my love, my fair one, and come away. · For lo, the winter is past, the rain is over and gone. The flowers appear on the earth, the time of the singing of birds is come, and the voice of the turtle is heard in our land. The fig-tree putteth forth · her green figs, and the wines with the tender grape give a good smell. · Arise, my love, my fair one, and come away.' Canticles, chap. ii.

ver. 10, 11, 12, 13.

This, fays Mr. Jones, is the language of Christ to his Church, and a kind invitation to the returning finner. ' He invites her to come away from poverty and diffress, from the power of her foes, and shelter herself in his beloved embraces. He invites her to come away from her fears, to come away from ' the land of scarcity into that delightful garden which his right hand had planted. In the text he gives her the reason of this invitation, and describes the blessing he had provided for · her.'

He makes use of the image of spring to represent the gifts and graces of his church: 'come away then to Jesus (says Mr. Jones) for the winter is past. You remember what it was to be in the · cold winter of spiritual death, and in the dark night of guilt. · Happy for you, my brethren, this winter is past. The sun of righteousness arose and dispersed the clouds of ignorance and unbelief, and a glorious gospel has broke in upon your hearts. · The rain is over and gone; the storms of God's wrath rained down vengeance upon bim for your fins and transgressions. Sin excited God's anger and indignation; but, to your un-• speakable comfort, the storm is blown over.' He tells us a little after, that the flowers appearing upon earth are the feeds of grace, the finging of the birds is the hymns and spiritual songs fent up by the faithful. The voice of the turtle is the heavenly mystic Dove, the Holy Spirit; the fig-tree putting forth green figs is your own good works, the fruit of your good vine. The vine (fays this reverend trifler) of itself will never grow ' upright; unless it be supported by a wall, or some other ' prop, it always creeps upon the ground.'

But how are we to reconcile come, my fair one, with the wordsin the first chapter, where she says, I am black, but comely, &c. Mr. Jones has a trick to fet all this right again. 'I am black · fays he) and defiled with fin, confidered in myself; but I am comely and fair, as being invested with the righteousness of ' my Lord.' With fuch kind of stuff this celebrated preacher amuses his hearers. Now and then he cries out, with the usual

cant of enthulialts, to keep up his consequence: 'My brethren, 'you may venture to believe me. A word to the unawakened.

But I won't threaten, I won't use terrifying words (good

creature!) I'll try what love will do. And now I have given

my promise not to terrify you with severe threatenings, I hope

wou will promise me one thing in return; and that is, to give me your serious attention. I will not detain you long, but

will fay what I have to offer in a few words.

· Sinner, whoever thou art, (I know thee not, but I hope thy own conscience will find thee out) Sinner, I have a com-

fortable message this day unto thy soul. Perhaps you doubt

it. You have been a fwearer, fabbath-breaker, &c. or at leaft, if you are outwardly decent, you are quite indifferent

' about the comforts of the gospel. Yet, (can you believe it? slop

" and wonder at the news) to you, even to you does the bleffed

* Jesus speak. I call upon thee, O man! I call upon thee, O

woman! to crucify my dear Lord no more, and I promise thee,

* &c.' Is it not aftonishing, that there should be a set of beings that stile themselves rational, who throng in crouds every sabbath-day to hear with attention, and even with rapture, such Galimatias; and is it not equally astonishing, that any man could first preach and afterwards publish it?

Art. 12. An Appendix to the Critical Review of March last; or, plain Queries, addressed to the authors of the account of Mr. Ashton's Sermon on the Fast. 8vo. Pr. 6d. Waller.

The authors of the Critical Review have always endeavoured, as much as possible, to avoid disputes and altercation with those angry writers who may chance to be displeased at their animadversions: if our criticisms are just, the public will approve of and adopt them; and if they are not (as we by no means pretend to be infallible) the same impartial public will reject them. Authors are however, undoubtedly, the most improper judges of our candor and abilities, with regard to our remarks on themselves. The author of the Appendix, who is, we suppose, no other than the author of the sermon, must therefore excuse our entering into a hypercriticism on his learned defence, the whole of which rests on this mind; viz. that if wit and antithesis are blameable in a sermon, the prophets and apostles are as guilty of it as himself. Mr. Ashton had represented men as making gods of cards and dice. The apostle describes them as making a god of their belly. The expression of making a bargain with God is, in our author's opinion, as defenfible as the apostle's of mocking God; and rent your hearts and not your garments as strong an antithesis as any in bis sermon. The reader plainly fees the dilemma which the Dr. would re-

duce

duce us to, either to give him leave to be as unfeafonably witty as he pleafes, or to find fault with the stile of the facred writers. A sensible man will perceive this method of arguing deserves no answer; we shall therefore give it none. We said before, and we here repeat it, that we only mentioned these little faults, for so they appeared to us, because we thought them unworthy of so good a preacher: for when men of abilities are guilty of them, it gives fanction to what is wrong; and should therefore, in our opinion, be always taken notice of.

Art. 13. An Answer to the Remarks on a Treatise upon the Hydrocele. By John Douglas, Surgeon. 8vo. Pr. 6d. Wilkie.

We review this pamphlet with regret, as the last work of an ingenious young gentleman, whose extraordinary talents and skill in his profession have rendered his death a missortune to the public. He seems to have acquitted himself fairly of all or most of the errors and misrepresentations laid to his charge; and this task he has performed with that earnestness which bespeaks a laudable concern for one's own candour and reputation.

Art. 14. A genuine and particular Account of the late Enterprize on the coast of France, 1758. By an Officer. In a Letter to a Friend. 8vo. Pr. 15. Griffiths.

Here we have a shilling pamphlet, which we look upon as a curiosity, inasmuch as it is created out of (almost) nothing. For three half-pence or two-pence any person might purchase the essence of this performance in the Daily Advertiser, and have all the other news of the day, together with the advertisements into the bargain. But, these are taxes which one class of booksellers lay upon the eager curiosity of the public.

Art. 15. An exact Account of the late Expedition, with the particulars thereof. In a Letter from an Officer to his Friend in London. 8vo. Pr. 15. Wilkie.

This is a catchpenny of the same kind, written on the same subject, executed in the same degree of merit, and perhaps by the same hand, with such variation in stile and method as was judged necessary to throw dust in the eyes of the people. If this is really the case, the author is not ill qualified to raise contributions on the enemy.

Art.

Art. 16. A short Review of Mr. Hooke's Observations, &c. concerning the Roman Senate, and the Character of Dionysius of Halicarnassus. 8vo. Pr. 6d. Griffiths.

The author of this pamphlet is, in all probabilty, the perfon who is to oblige the world with a translation of Dionyfius Halicarnassus; and, therefore, it is no wonder he attacks Mr. Hooke with fuch fury, for having stigmatized that historian: but, whether he is, or is not, the translator of Dionysius, certain it is, he is a professed republican; and, with the temper and politeness peculiar to that sect, argues against the writer of the Roman Hiftory. He charges him with being dull, scurrilous, malicious, and ignorant: but, the stress of his rhetoric feems to lie upon Mr. H——ke's being a Roman Catholic, a bloody parson-roasting papist, of consequence an enemy to civil, as well as to religious liberty, and a friend to the p--r. He has rung the changes upon these articles of accusation, with all the spite, bitterness, and illiberal heat of an angry fanatic; and, laying afide all appearance of candour, prefumed to vilify the talents of Mr. Hooke as a writer, which have fo justly merited and obtained the applause of the public.—But who is he that fo superciliously contemns an author of established reputation?—The name of his publisher speaks his eulogium.—Doubtless, he is some learned Flamen who officiates under the Pontifex maximus G---s and his fybil, in that temple which has produced fo many specimens of genius, wit, and candid criticism.

Art. 17. The Virtues of Wild Valerian in Nervous Disorders. With directions for gathering and preserving the root; and for chusing the right kind when it is bought dry. Shewing that the uncertainty of effect in this valuable medicine, is owing to adulteration or ill mananagement. By John Hill, M. D. Illustrated with Figures exhibiting the true and false root, and the entire plants. 8vo. Pr. 8s. Baldwin.

In this spectre of a performance we are told, that the root of the Valerian, which grows on heaths, or dry places, is preferable to that which is found in moist and greasy soils: that the insussion of this root is an excellent nervous medicine; and that the author has found it particularly efficacious in removing headachs occasioned by too great attention. This is a hint to the reader, without which we should not have imagined that he had ever given much attention to any one subject: for all his productions that we have seen, appear to have been altogether extempore. He has obliged us with plates of the different plants: but, whether or not they are of his own engraving, he has not thought proper to disclose.

Art. 18. The Prussian Campaign. A poem : celebrating the atchievements of Frederick the Great, in the years 1756--- 57. By William Dobson, LLB. 4to. Price 1s. Manby.

The ingenious author of this poem is already well known to the learned world, by his excellent translation of Milton's Paradise Lost into Latin verse, which seems, though a work of the greatest merit, to have experienced the fate of the original, and for want of a true classical taste amongst us, to be neglected. In the Prussian Campaign Mr. Dobson has throughout studiously imitated his great master, as well in the harmony of his numbers as in the true poetical fire and spirit of the whole performance. Unfortunately for our bard, the scene of action lies in places whose names are rather unpoetical; * Brandenburgh, Koningstein, Tournitz, Hildburghausen, Low'schatz, &c. though they contribute to raise the reputation of the hero, make (as Shakespear says) the blank verse halt for them: besides that, the present manner of fighting, drums, trumpets, entrenchments, cannons t, bombs, mortars, &c. is not half fo pretty in description as the simplicity of ancient combats, together with the convenient machinery of gods and goddeffes, who were always ready to help a poet at a dead lift. Mr. Dobfon has, notwithstanding, in spite of all these disadvantages, given us some excellent lines, and done justice to one of the

- levelling their rage At mighty Brandenburgh ---___ gall'd at his fate Undaunted Lobkowitz superior tow'rs. A mighty hoft, and Koning Jegg commands. Under their gallant leaders, great Soubife And Hildburgbausen . -

I From the hostile rear Sudden the latent engin'y difgorge, Hurl'd from their brazen throats the flaming balls Innumerable, &c. Fred'rick's fierce infantry with furious speed Thro' iron tempests, and thro' floods of fire

To Low'schatz's walls intrepid flew. -- th' alarm

Of drums loud-thund'ring, and the trumpet's clang, Sonorous ·

Here the right wing display'd, and there the left.

The description in these and many other parts of Mr. Dobfon's poem may be very just: but still the battles of Homer and Virgil are much more poetical.

Vor. VI. July 1758. G greatest

greatest characters that perhaps ever appeared, whom he pro-

' The great, th'inimitable chief.'

The king of Prussia's attack of the Austrian army in their intrenchments after he had passed the Moldau, is painted with life and spirit.

Still undaunted his bold march

Fred'rick pursues: he nor their 'vantag'd ground,
Nor high-fenc'd camp, nor trenches deep regards,

Nor numbers far superior. On he leads

- To the fierce combat his courageous bands.
 They, by their monarch's voice, (that fav'rite voice)
- Enliven'd, joyous spring, with sweet presage
 Of victory; their standards wide unfurl'd
- ' In awful pomp, with rich emblazonry
- Of vivid colours, streaming to the wind:
 And o'er the horrent plain of glitt'ring steel

· A wavy harvest formidably gleam'd,

- ' Innumerable faulchions, the fun's blaze
 ' (Oft as his radiant beams from fleecy cloud
- ' Emerg'd) reflecting fierce with burnish'd sheen;

E'er long to be imbru'd in Austrian gore.

- ' Swift thro' the ranks undaunted Fred'ric sprung, ' High brandishing his faulchion, Austria's dread,
- From wing to distant wing unwearied flew,
 Now in the van, now rear: on ev'ry part,
- Thro' each viciflitude, each varying scene,
- With fplendid conduct, animating founds,
 And brave example, his obsequious bands

' Inspir'd, directed, instigated, cheer'd,

And all his various pow'rs by turns display'd:

Fervid, yet vigilant; with temper'd fire
Guiding the rapid war's alternate reins.

Towards the conclusion of this little poem we meet with the following lines:

' Hark how the fons of Albion's glorious ifle

Tune in harmonic choir the conqueror's praise!
Thee, Frederick, all her glist'ning cliffs resound,

' Thee her gay vallies, thee her mosfy caves;

And grove to grove repeats the pleafing fong.

Britannia, resting on her ported spear,

Majestic smiles; and with the pleasing song
 Enraptur'd, venerates the prince, so bright

· Resembling her lov'd lord, to valorous George

' In magnanimity, as in blood, allied.'

The image of Britannia resting on her spear and smiling, is trnly poetical, and the compliment that follows natural and just.

Mr. Dobson might, in our opinion, have adorned and improved his poem, by considering his hero as well in private as public life, as a legislator, a scholar, a writer, and patron of literature; but this we suppose he has reserved till after the conclusion of a peace, when these parts of his character may be dwelt upon with more propriety.

Art. 19. Avon. A poem in three parts. 4to. Pr. 6d. Dodfley.

Avon is a very foft and inoffensive poem, one of those where (as Pope says of some of his own)

"--- fmooth description holds the place of sense."

It seems to be the production of a young bard scarce sledged, who is just trying his poetical wings, and sluttering about the regions of Parnassus. The work is divided into three parts, the first of which is by far the most tolerable: the other two being employed in tedious narrations, or quaint * conceits and prettinesses.

The following lines on Shakespear, who, luckily for Avon, was born on the banks of that river, are the best in the whole poem.

' Behold, behold the laurell'd Shakespear rise,

Grace in his mien, and lightning in his eyes,

See vary'd wit in ev'ry feature play,

- · See kindling passions, rap the soul away.
- · Posses'd of more than his own Prosp'ro's skill,
- · He makes me what, and leads me where he will.

Diffusing wide the social flow of foul,

- With Falftaff now we quaff the sprightly bowl:
- Now borne sublime on magic wings I go,
- " O'er haunted heaths, and Caledonian snow,
- ' To knock at bold Mackbeth's perfidious gate,
- And wake revenge for gentle Duncan's fate.
- ' An exile now, thro' peaceful Arden's grove,

· I feek the bands of loyalty and love:

- Now warm in Agincourt's illustrious field,
- ' See trembling Gallia's boastful squadrons yield.
- · Now inatch'd away, o'er hills and vales I fly,
- ' Till Rome's proud structures fill my ravish'd eye;

* Speaking of Bath, he calls it a place

Where patients are configned, when hope's no more, To pass by water to th' Elysian shore.

And a little after he talks of the antiquary,
Who fed on fweet conjecture all the day,

Oft wanders pathless to find out the way.

That is, The Roman road. guit to insuligra rodite modeler

Souther

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- · Stay, Brutus stay, Rome merits not the blow;
- * Can she be free at once and venal too?
- " See rank corruption lure the birds of prey,
- · And call each dormant monster into day.
- " Why fwell the fails, why founds the dashing oar?
- Bring bays, bring myrtle for th' advent'rous Moor.
- " Ah gen'rous fair in beauty's fav'rite isle,
- Why fall thy tears, and fades thy nuptial finite?
- Infernal fiend! to ev'ry conscience dead,
 - Behold the tragic load of yonder bed!
 - But what is he whom yonder doors difmiss
- In fuch a night, fo ftern, fo black as this?
- In darkness lost, except the light'ning's gleam
- Wraps his white head, like Hecla's brows in flame.
- Sworn of his train, with honest Kent I draw,
 - " The heart-struck monarch to the shelt'ring straw."

There is likewise a genteel compliment to Shakespear's best interpreter, that is not ill expressed.

- "He lives confess'd when Garrick treads the stage,
- · Feels all his wit, and glows with all his rage.
- And thou, to reason just, and Shakespear's claim,
- Still nobly press the fairest way to same.
- " Best comment of thy master's great design,
- Around his oak thy verdant ivy twine.
- "To folly's weak retreats let others fly,
- Lull the void ear, or please th' incurious eye;
- "Tis thine while genius leads thy steps along,
- Guides thy just hand, and prompts thy tuneful tongue,
- To charm the wife with nature, wit, and fense,
- Give tafte no pain or decency offence:
- " While dull grimace, and wild grotefque, are made
- 'Thy noble facrifice to Shake/pear's shade.

This poem is extremely well printed: the ingenious Mr. Baskerville of Birmingham having honoured it with his own new excellent type, and paper.

Art. 20. The wessels of mercy, and the wessels of wrath, delineated, in a new, uncontroverted, and practical light. A Sermon first preached in New-Kent, Virginia, August 22, 1756. By Samuel Davies, A. M. 8vo. Price 6d. Buckland.

Mr. Samuel Davies having been at the expence of transporting his fermon from Virginia, it becomes us to treat the foreigner with due respect. We therefore read it with all proper attention, and are forry to find it was not worth the carriage, being nothing but a heap of Presbyterian cant and enthusiasm, without either argument or stile to recommend it. The author

author tells us in an epistle dedicatory to his friend Mr. Gibbons in London, that when he preached this sermon (being (a dissenter) he was gazed at by some as a curious, and by others as an horrendous phænomenon. He begins his discourse, according to the method generally made use of by these gentlemen, with playing upon and torturing the words of the text, the vessels of wrath sitted to destruction. And—the wessels of mercy, which he had afore prepared unto glory.

Vessels of wrath! (says Mr. Davies) how terribly emphatical is this phrase? Vessels dreadfully capacious of divine wrath!

to be filled to the brim with that burning liquid! But how

beautifully fignificant is the metaphor, — Vessels of Mercy!
Vessels formed, prepared, finished, adorned by the gentle and

skilful hand of divine mercy! Vessels capacious of mercy; and

to be filled, to overflow, with glory!"

In regard to the vessels of wrath he tells us, that 'the slames of hell will burn dreadfully bright to reslect a terrible, yet amiable splendour upon them.' We believe this is the first time that the epithet amiable was ever apply'd to bell slames. In the next sentence he informs us, that 'it is for this terrible, but righteous end, among others, that God now endures them with so much long-suffering, that his perfections, and the honour of his government, may be the more illustriously displayed, in the execution of deserved punishment upon them.'

From this representation of divine justice, God should seem to take a pleasure in treasuring up vengeance, and permit his creatures to go on in sin that he may inslict the heavier punishment upon them. How inconsistent this is with the mercy of the Almighty, and how unworthy of his all-persect nature, we

leave every unprejudiced mind to determine.

Our author then proceeds to enquire wherein doth preparation for glory, and wherein deth fitness for distraction confist? The fum of what he fays on this subject is no more than that if the difpositions of men are good and heavenly they will go to heaven. and if they are diabolical and hellish they must go to hell. · If (fays he) you love fin more than holinefs, can you flatter ' yourselves you are fit for heaven? alas! it would be as un-· natural an element to you, as for a fish to live out of water, or you in it.' There, gentlemen, is a pretty fimile for you about heaven; and as to the other place, 'unless (he cries out) ' your infernal tempers are changed, you must dwell with devils for ever. Alas! Sirs, a foul without the love of God is de-" vilized (a pretty word) already, ripe for destruction and fit for nothing else.' Sin naturalizes and fits you for the infernal regions; you are as fit for destruction as a murderer for the gallows,

gallows, or a mortified limb to be cut off; fuch veffels must

be thrown into some dark corner of hell, that they may not incumber the apartments of the universe. God will make his

' punitive (another pretty word) power known, &c. &c.'

Mr. Davies concludes his fermon in this pathetic manner:

May I hope, that I shall succeed at least with some of you this day, to sly from this tremendous destruction, into which you are this moment ready to fall? Alas! it is hard, if even a stranger cannot prevail with so much as one soul, in so large an assembly, and in a point so reasonable, and so strongly ensing with you; and if you do not remember it now, you will remember it millions of age hence, when the remembrance of it will torment you with intolerable anguish. Which is as much as to say (for this is the meaning of it, if it has any). Gentlemen, if you do not remember my sermon, you will all be d—n'd; a pretty extraordinary commination from a

By the small specimen here given our readers may form a tolerable judgment of this performance. For our own parts we cannot but be concerned to find that such preachers have got a footing in our colonies, as it can only tend to the propagation of error and enthusiasm, instead of the sober and rational dic-

tates of the true reformed and protestant church.

Art. 21. An Extrast out of Pausanias, of the statues, pictures, and temples in Greece, which were remaining there in his time. 800. Pr. 4s. Shropshire and Dod.

This extract from Pausanias contains a faithful account of all the temples, statues, and paintings remaining in Greece, when he travelled over all its states about the 177th year of the christian æra. We cannot read the description of them, without forming to ourselves the most exalted ideas of that great and noble nation, the seat of literature, the throne of science, and all the politer arts which grace and dignify mankind. One is associated to find such a variety of excellent works in every kind; every corner of Greece was then crouded with the most valuable performances in painting and sculpture by eminent artists. We cannot, indeed, at the same time look over the catalogue, without making some melancholy restections, and lamenting the depredations of time, when we consider how sew amongst all these monuments of human art are now remaining.

This extract may be of fervice to those modern artists who are unacquainted with the merit and labours of antiquity; and though it only gives an account of things no longer subsisting, yet as it frequently describes the manner in which the antient

painters

painters treated their subjects, how they grouped their figures, the forms and attitudes of their statues, &c. it may afford some instruction to the ingenious. The work must likewise be useful to the learned world, as many parts of it tend to throw a light on the antient poets, and explain the heathen mythology.

Art. 22. The Anglers. Eight Dialogues in Verse. 12mo. Price 6d. Dilly.

There is fomething in these dialogues more whimsically entertaining and agreeable, than from the subject we expected to find in them. The author seems rather to have written for a little amusement, than from any very sanguine hopes of immortality: his muse is therefore in dishabille, and has a slatternly air and behaviour. There is notwithstanding an ease and genteelity about her, which appears through all her negligence, and recommends her to our approbation. The dialogues open with a moral sentiment not ill expressed:

' Virtue, my friend, on no enjoyment fmiles

- Which idle hours debase, or vice defiles.
- "The wife to life's momentous work attend,
- And think and act, still pointing to their end:
- As you clear streams one constant tenour keep,
- * Rolling their liquid homage to the deep.
- Sports (like parentheses) may part the line
- · Of labour, without breaking the defign.
- But as in verse, parentheses (if long
- ' And crowded) marr the beauty of the fong;
- So pastimes which ingross too large a space
- ' Disturb life's system, and its work deface.'

The third dialogue between Museus and Simplicius begins with some very good lines:

- ' The seasons, surely, in these northern climes,
- ' Laugh at their image drawn by modern rhymes.
- · For fpring oft shivers in the British isle;
- But warms, in British song, with Baia's smile.
- " Ev'n now, the hawthorn, on the birth of May,
- " Withholds her bloffom, nor believes the day."

The author best knows whether this is all his own.

After a description of the whale-fishery in the sixth dialogue
(which by the bye is rather tedious) Lucius makes us amends

by what follows:

- ' L. By arts, like thefe, shall Britain's glory grow,
- With bufy life her crowded havens glow.
- · Her villages shall simile, her towns rejoice,
- And not a figh untune the public voice.

 Her poor shall fing, sloth's execrable band
- · Of thefts and murders fiee this happy land: 'As

" And round her coasts, round ocean's utmost shore,

· The thunder of her sovereign fleets shall roar.

- . V. Time was, my Lucius, when this pompous stile
- Swell'd not too high for Britain's dreaded isle.
 But ah! one shameful day our hopes has crost,

· Each Briton blushes for Minorca lost.

· Scorn'd by our friends, derided by our foes,

· Heav'ns! how my heart with rage indignant glows!

· O for a race of honest men to rise,

Whose patriot souls th' enormous bribe despise!

Whom party warps not, nor ambition fires,
But all their country all their fouls infpires.

It is plain from many passages in these dialogues that the author had a taste for rural beauties, and no contemptible talent in the descriptive.

' If (fays he) war's ev'ry art should fail,

· And heartless, homeward, your tir'd steps you trail;

Some beauteous landskip may relieve your pain,

The pride of fummer in her ev'ning reign.

· For the road rifes to a gentle hill,

Where I and Florio paus'd, our eye to fill.

' Thence, pleafing Ipswich, on our right we hail

'Thy roofs and temples cluster'd in the vale.

· Her river, on the left, expands its tide,

' And, moor'd afar, diminish'd vessels ride.'

If thou expectest, gentle reader, to find in these dialogues any wholesome instruction in the noble art of Angling, thou wilt be disappointed; for there is not, as we remember, a line that can make thee a bit wifer than thou wert before. Fish therefore as thou wert wont, and let some one read the dialogues to thee whilst thou art fishing; so shalt thou have some sport even if they do not bite.

Art. 23. A Second Letter to an Apothecary at Windsor, concerning a late very extraordinary physical transaction at Eton. By Ch. Bateman, surgeon at Chertsey. 8vo. Price 6d. Coote.

We know not who this apothecary is, but we would not stand in his shoes for all the gallipots in his shop, even though they were filled with balm of Gilead; for we know no balm, of efficacy to heal a conscience wounded with the reslection of having rashly bereaved a fond parent of his darling child.—Not that we arrogate to ourselves the power of judging in such a delicate transaction: but, as the accused apothecary has taken no public step towards vindicating his character from the public charge that was so pathetically brought against it, we cannot help thinking that Mr. Bateman has great reason to complain; and even to publish this second expostulation, which is, like the first, close, warm, and affecting.